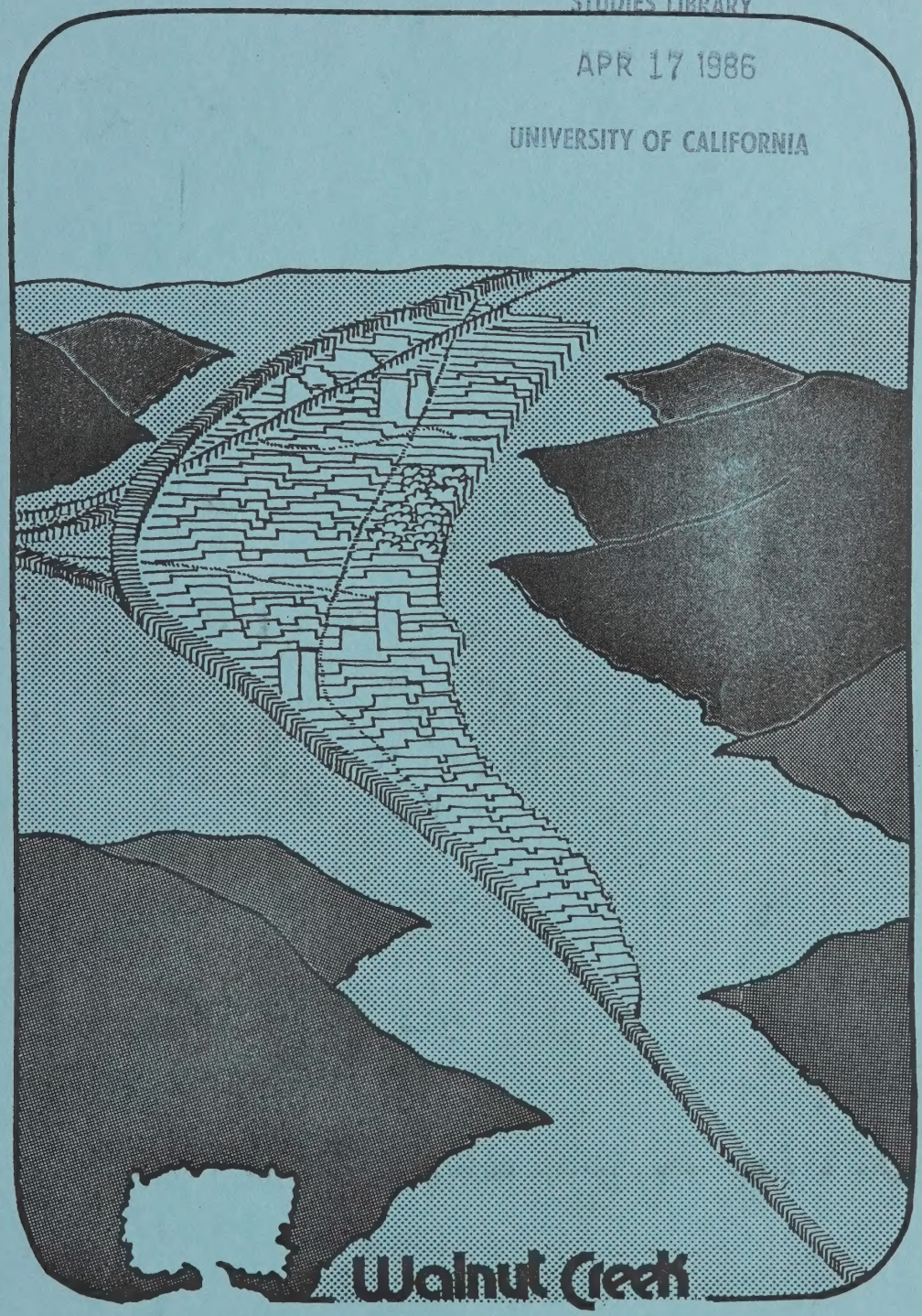
DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT



1985 CORE AREA PLAN STUDIES

VOLUME IV

DRAFT SUPPLEMENT

TO

ENVIRONMENTAL IMPACT REPORT

FOR

1985 CORE AREA PLAN STUDIES

City of Walnut Creek
Community Development Department

January 1986

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I. INTRODUCTION

This draft supplement to the Final Environmental Impact Report (hereinafter referred to as Draft Supplemental EIR) for the 1985 Core Area Plan studies has been prepared under the provision of the California Environmental Quality Act and the State and Local Guidelines which implement the act. The Supplemental EIR is the fourth volume of environmental documents printed for the Core Area Plan studies. Volume I contains a SUMMARY of Impacts, Mitigation Measures, and an ADDENDUM which provides additional discussion of traffic and circulation, urban design, fiscal and economic, noise, and air quality impacts and alternatives considered. Volume II contains COMMENTS RECEIVED and RESPONSE TO COMMENTS ON THE DRAFT EIR and the EDITED VERSION OF THE DRAFT EIR. Volume III, is the SUPPLEMENTAL TECHNICAL APPENDICES REPORT FOR VOLUMES I & II. Volume IIIb is the technical appendices report for the Supplemental EIR (Volume IV).

The Final EIR for the Hearing Draft 1985 Core Area Plan was published in February 1985. It assesses the environmental impacts of the Hearing Draft Plan. On March 8, 1985 the Planning Commission certified the Final EIR, approved the Hearing Draft Core Area Plan and recommended it to the City Council. The Council subsequently held a public hearing and is considering minor changes to the Hearing Draft in the areas of land use, development intensity, building heights and setbacks. The Council proposed Draft Core Area Plan (hereinafter referred to as the Council Draft Plan) constitutes the project in the Draft Supplemental EIR. In the Plan the Council is considering major revisions to traffic circulation and traffic improvements in the Ygnacio Valley Road Corridor. Because new environmental concerns have been raised and recent traffic and circulation issues have not been reviewed or considered by the Planning or Transportation Commissions, this Draft Supplemental EIR is being prepared.

The Draft Supplemental EIR will be circulated for a 45-day review period to allow sufficient time for review and comment by responsible agencies and the public. Following that period the City Council will direct the preparation of the Final Supplemental EIR and the Council draft of the Core Area Plan. Those documents including the Responses to Comments and the Final EIR will be available for public scrutiny prior to public hearings by both the Planning Commission and City Council.

The City will use the Final EIR and Supplemental EIR (Volumes I-IV) as a Master Environmental Assessment under applicable provisions of CEQA. This will provide overall environmental assessment for all development projects contemplated in this document and consistent with the revised Core Area Plan as it is adopted. Future projects would be evaluated for environmental effects, but would not be required separate environmental impact reports unless project impacts exceeded or differ from those analyzed in the Final EIR document. In some cases, mitigation measures suggest that additional environmental assessments be prepared for certain potential environmental impacts. In order to maintain the currency of the Master EIR, the City will periodically review and update the information presented in it.

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II. SUMMARY

The Council Draft Plan contains three elements--Land Use, Transportation, and Urban Design--which will establish City policy and guide development in the Core Area for a ten year period.

The **LAND USE ELEMENT** would:

1. Generally maintain the land use pattern established by the 1975 Core Area Plan except in the Mt. Diablo Boulevard area where high density residential uses (up to 100 dwelling units/acre) are proposed.

2. Strengthen retail uses in both the Pedestrian and General Retail areas.

3. Expand existing public parks, open spaces and trails to serve residents, employees and shoppers.

4. Identify appropriate secondary land uses for some institutional use sites.

5. Establish new provisions for land use intensity (floor area ratio) in some office areas.

6. Control the rate of office development through an annual metering limit and project evaluation criteria.

The **TRANSPORTATION ELEMENT** would:

1. Provide for construction of the North and South Broadway extensions.

2. Modify and widen the existing Core Area street network except in the Ygnacio Valley Road corridor.

3. Identify truck routes on arterial streets.

4. Establish a centralized transportation systems management (TSM) program which promotes transit, bicycle, pedestrian and parking alternatives.

5. Plan for major improvements to the I-680/24 freeway system as proposed by Caltrans.

The **URBAN DESIGN ELEMENT** would:

1. Reinforce the image of the Core Area by encouraging high standards of design, visual and pedestrian amenities and pedestrian activity centers.

2. Establish new height limits and building setbacks.

3. Define the functions and priorities for street facilities.

4. Preserve desirable land uses, creeks and open space resources.

POTENTIAL IMPACTS AND MITIGATION MEASURES

The Draft Supplemental EIR focuses on the potential environmental effects of the three following roadway improvement alternatives in the Ygnacio Valley Road corridor:

1. At-grade Cross-Town Connection,
2. Grade-separated Cross-Town Connection, and
3. Arroyo Couplet with the At-grade Cross-Town Connection.

A. TRAFFIC IMPACTS

1. The Cross-Town Connection alternatives would:

   a. Improve access to the Broadway Plaza and Town Centre areas,
   b. Divert approximately 20% of traffic from Ygnacio Valley Road,
   c. Provide an alternative route for Walnut Creek residents and regional through traffic destined between Ygancio Valley and points south of the Core Area,
   d. The Arroyo Couplet option would additionally improve north/south traffic and left turn movements at Ygnacio Valley Road intersections and create surplus right-of-way for a portion of the Ygnacio Valley Road greenway.

2. The Arroyo Couplet option provides the best possible mitigation of the three alternatives, although sixteen intersections are projected to function at undesirable levels of service; "E" and "F" in the future.

3. Existing and future traffic demand results in volume to capacity ratios of .85 or greater at numerous intersections. This condition is inconsistent with the provisions of the Traffic Control Initiative.

4. Traffic volumes on Mt. Diablo Boulevard would increase by more than 100% with the Cross-Town Connection.

5. With the Cross-Town Connection traffic volumes on South Broadway Extension would nearly double the anticipated number of trips shown in the South Broadway Extension Final EIR.

6. The levels of development being considered by the Council would continue to add cumulatively to traffic impacts on the I-680/24 freeway system.

7. The proposed Caltrans improvements to the I-680/24 freeway system would cause short-term impacts resulting in periods of severe traffic congestion, traffic diversion and street and ramp closures in the Core Area.

Mitigation Measures:

1. One-way couplet street systems provide the best possible mitigation in the Core Area. The City should consider all couplet alternatives

studied in this report and also consider levels of development lower than presently being proposed.

2. The City will undertake a comprehensive City-wide traffic circulation study and establish policy and/or roadway improvement alternatives which address the Traffic Control Initiative provisions.

3. The City will continue to study improvements to Ygnacio Valley Road east of the Core Area and work at the regional level to identify roadway and transit improvements including Regional, State, and Federal funding mechanisms.

4. The City will continue to work with Caltrans to plan for improvements to the I-680/24 freeway system that will accommodate the increased demand generated by Core Area development.

5. The City will monitor the Caltrans environmental review process for the I-680/24 improvement project and work with Caltrans to minimize construction related impacts.

Mitigation Alternative

1. Although contrary to the Traffic Control Initiative, the City could amend its policy regarding levels of service and accept higher levels of congestion (i.e.,lower levels of service) during peak hours.

2. The City could adopt an ordinance to reduce required parking or establish a parking "cap" for downtown office uses in an attempt to reduce the number of vehicles destined for the Core Area.

3. The City could substantially reduce development potential throughout the Core Area.

B. NOISE

1. Residential areas, school, health and recreation facilities adjacent to Ygnacio Valley Road, the Cross-Town Connections, Mt. Diablo Boulevard and I-680 would be exposed to sound levels in excess of 60 dBA (CNEL).

2. The most impacted residents will be exposed to sound levels in the 70-72 dBA range.

3. In the area of the South Broadway Extension, residents and students would be subject to higher noise levels due to a doubling of traffic volumes on this portion of the roadway.

4. Short-term noise impacts would result from construction activity along the proposed roadway segments.

Mitigation Measures:

1. Residential Areas - The City should require acoustical studies and appropriate mitigation measures for new and existing single family and

multiple family residences located in any area having noise levels that exceed 60 dBA (CNEL).

2. Commercial Uses - Future commercial uses in areas exceeding 70 dBA (CNEL) should have building plans evaluated by a qualified acoustical engineer.

3. Other Sensitive Receptors - The City should require acoustical studies for additions and new development or prior to any major roadway improvements and widenings in the vicinities of the following uses: Kaiser Hospital, Las Lomas High School, private schools, Walnut Creek Elementary School District offices and school facilities, and convalescent homes or hospitals.

4. The planned widening of the I-680/24 interchange is likely to impact on existing residential areas and other sensitive receptors. The City should monitor the environmental studies being prepared by Caltrans for a clear identification of impacts and mitigation measures as appropriate.

C. AIR QUALITY IMPACTS

1. Based on the CO line source analysis neither the eight hour or one hour State standards are exceeded, however, continued levels of traffic congestion resulting from "E" and "F" levels of service may result in a deterioration of CO levels and long-term cumulative adverse impacts.

Mitigation Measures:

1. The City should consider additional roadway improvements that would reduce the number of intersections anticipated to function at levels of service "E" or "F".

2. TSM Programs and ordinance adoption suggested in the Council Draft Plan should be implemented to reduce the level of vehicular emissions. TSM program should specify the obligations of developers, property owners and/or major employers for support of ride-sharing, transit, flex-time and bicycle use.

3. California exhaust emission regulations currently in effect will reduce the incidence of carbon monoxide, carbon oxides and hydrocarbon impacts by the year 2,000.

4. Short term construction related dust control measures should be implemented as outlined in Table 6.

D. VISUAL/AESTHETIC IMPACTS

1. Construction of either the at-grade or grade-separated Cross-Town Connections on top of the flood control channel will result in significant adverse visual and aesthetic impacts on residents of those

single and multiple family structures directly abutting the right-of-way between Ygnacio Valley Road and Mt. Diablo Boulevard.

2. The grade-separated Cross-Town Connection would have significant adverse visual and aesthetic impacts on residents in the Holcomb Court area and for people driving on Mt. Diablo Boulevard and Newell Avenue in the vicinity of the proposed Cross-Town Connections.

Mitigation Measures:

1. Fast-growing landscaping and landscaped berms should be incorporated into the project to reduce visual impacts, invasion of privacy and soften the roadway edge.

2. Maintain pedestrian/equestrian access with the use of a trail and provide east-west street crossings at or near existing points of access.

E. SHARED USES WITHIN THE SOUTHERN PACIFIC RIGHT-OF-WAY IMPACTS

1. Additional right-of-way will be required at intersections and project costs could increase substantially if all proposed (channel, trail, utility, transit and roadway corridor) uses are developed within the Southern Pacific Right-of-Way.

2. Possible conflicts between vehicular, transit and pedestrian movements.

Mitigation Measures:

1. Provide separate signal phasing for vehicular turning movements.

2. Design the transit line to one side or the other of the Cross-Town Connection and possibly provide grade-separation at some point along the alignment.

F. ALTERNATIVES CONSIDERED

Traffic and Circulation:

1. Lacassie Couplet,
2. Pringle Couplet,
3. Courthouse Couplet,
4. Arroyo Couplet with the at-grade Cross-Town Connection,
5. Eight lane Ygnacio Valley Road,
6. At-grade Cross-Town Connection, and
7. Grade-separated Cross-Town Connection.

Miscellaneous Improvements Considered by the Council:

1. Underpass to Cross-Town Connections,
2. Raising the grade along Ygnacio Valley Road,
3. Connection to North Civic Drive from Cross-Town Connections,
4. Impact of not widening Ygnacio Valley Road east of the Core Area.

III. DESCRIPTION OF COUNCIL DRAFT PLAN

The Council Draft Plan evolved from the Council's review of the Hearing Draft Plan (approved by the Planning Commission on March 8, 1985), testimony received at public hearings (May 7 and 14, 1985) and numerous Council public study sessions (May through August 1985). It embodies suggested changes to land use, development intensity, building height limits, and setbacks. It also incorporates all of the transportation and circulation, components of the Hearing Draft Plan with exception of roadway improvements for the Ygnacio Valley Road corridor. The Council desired additional environmental review of several roadway improvement options and those are the primary focus of the Draft Supplemental EIR.

A. LAND USE

Figure 1 shows the Hearing Draft Land Use Map. Figure 2 shows the Land Use Map changes being considered by the City Council. The only changes are in the Mt. Diablo Boulevard area where residential and general retail uses have replaced office uses. The City Council's intent is to make a stronger housing statement in the Core Area and bolster office intensity adjacent to Ygnacio Valley Road. General Retail uses are located on the south side of Mt. Diablo Boulevard between I-680 and Bont Lane to serve as a buffer between the freeway and future residential uses. The Council Draft Plan incorporates the Open Space Areas shown in the Hearing Draft Plan. (Figure 3).

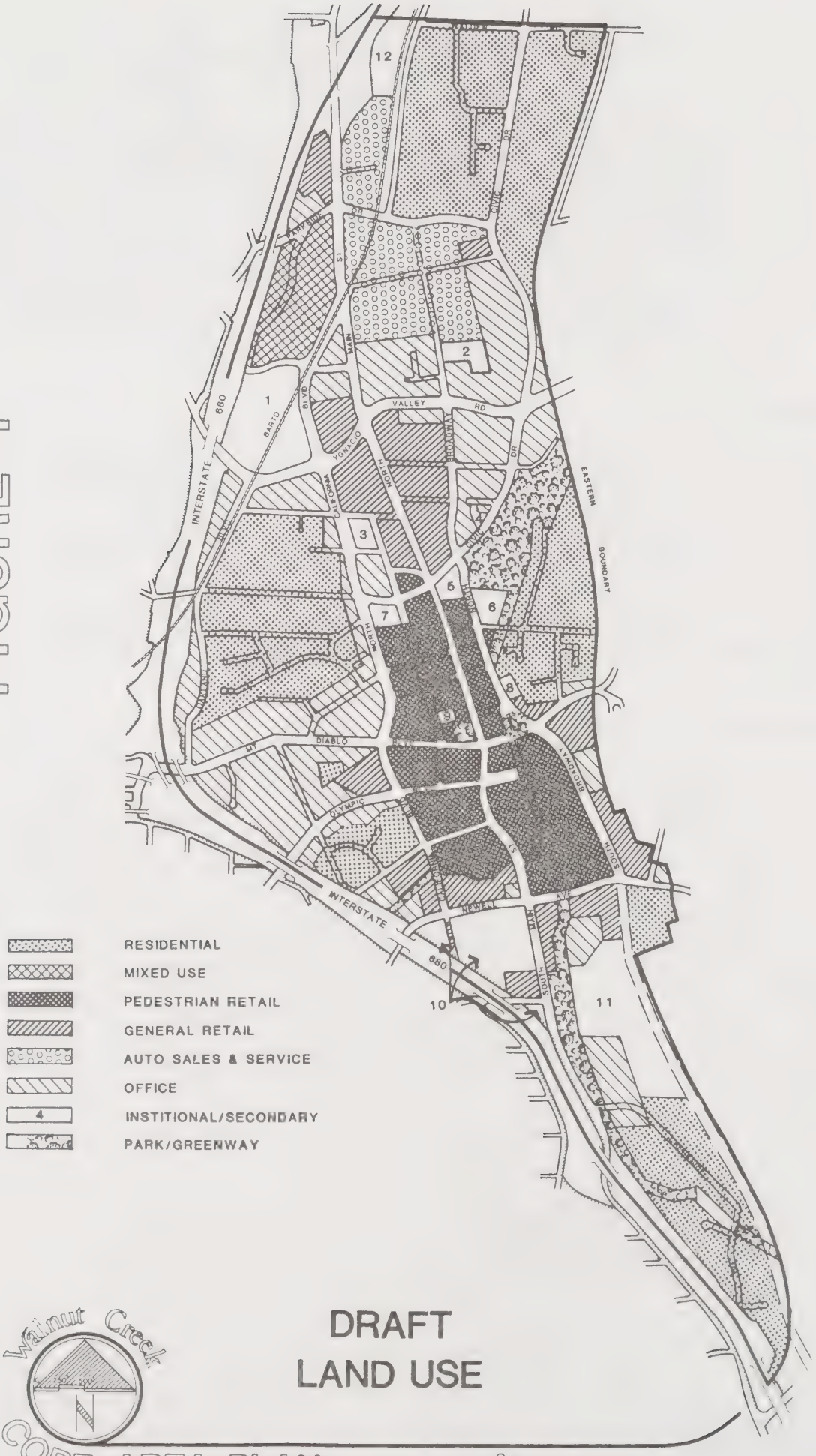
B. DEVELOPMENT INTENSITY

Figure 4 depicts Hearing Draft Development Intensities. Figure 5 shows the changes being considered by the City Council. In the Mt. Diablo Boulevard area, residential uses would be permitted up to 100 dwelling units per acre. In most office areas a range of Floor Area Ratios (FAR) would be established. Office intensities have been bolstered in the Ygnacio Valley Road area because of its proximity to BART and other regional transportation facilities. The purpose of an FAR range is to identify a permitted base FAR and to allow, at the City's discretion, increased FAR's up to a maximum if project designs include such features as underground parking, extraordinary landscaping, pedestrian facilities, public open space, public art or other unspecified public benefits. Where FAR ranges are not shown special design features are encouraged but not required except as specifically identified in the Urban Design Element of the Core Area Plan.

The Council Draft Plan could result in the following anticipated levels of development:

Increases Beyond Base 1985	
Office uses (square feet)	2,100,000
Retail Uses (square feet)	2,000,000
Residential units	3,350

FIGURE 1



DRAFT
LAND USE

Walnut Creek
CORE AREA PLAN

FIGURE 2

COUNCIL PROPOSED CHANGES

TO HEARING DRAFT

LAND USE

FIGURE 3

DRAFT
OPEN SPACE AREAS

Walnut Creek
CORE AREA PLAN

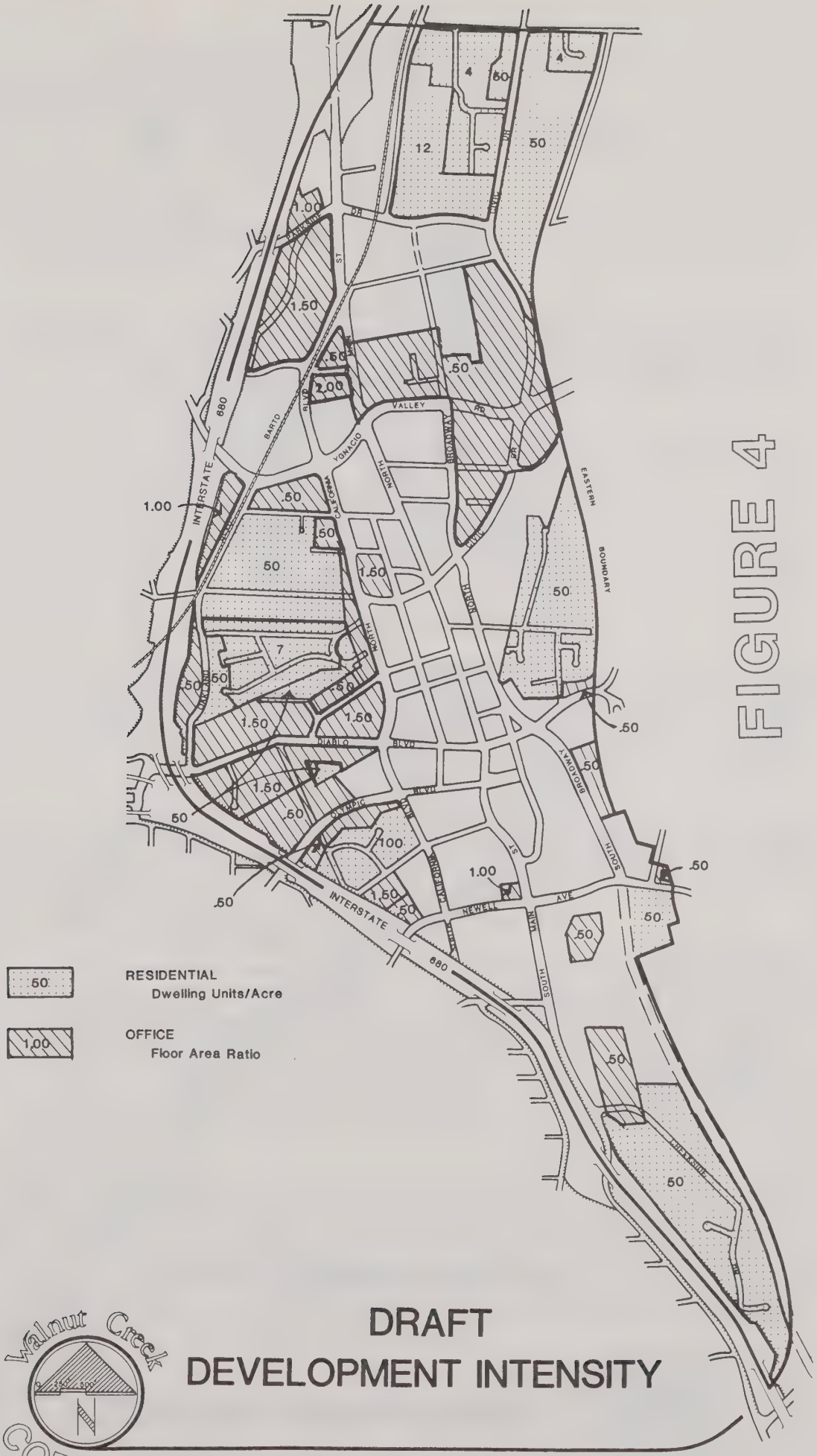


FIGURE 4

DRAFT
DEVELOPMENT INTENSITY

FIGURE 5

COUNCIL PROPOSED CHANGES

TO HEARING DRAFT

DEVELOPMENT INTENSITY

Core Area Total, Year 2000	
Office uses (square feet)	6,100,000
Retail uses (square feet)*.	4,000,000
Residential units	7,700

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*Includes hotels at 500 square feet per room

C. METERING

Metering development is proposed as a method of controlling the rate of growth. It is a concept that was not included in the Hearing Draft document, but is being considered by the City Council. The Council's metering goals are:

- Coordinate the rate of development with the provision of street improvements.
- Reinforce the use of alternative transportation modes.
- Create a balance of residential, office and retail land uses in the Core Area.
- Reduce construction related impacts on streets, parking and neighborhood uses.
- Preserve future development potential.

The Council initially considered metering development throughout the entire Core Area. They resolved that metering should be limited to office uses in the northern portion of the Core Area, because that area would have the greatest impact on traffic in the Ygnacio Valley Road Corridor area (see Figure 6).

The metering system would apply to Core Area projects that are predominantly (greater than 50%) office uses over 10,000 square feet. As proposed the annual metering rate would be 150,000 square feet per year and projects within the metered area approved prior to the adoption of the revised Core Area Plan would be given priority over a 2-3 year period.

Metering development requires a method of evaluating development proposals. A specific evaluation system would have to be incorporated into a metering ordinance, to be prepared after adoption of the revised Core Area Plan. The project evaluation system would rank projects according to points accumulated under each of the specified criteria. No one criteria would be dominant; rather the project with the highest total point count from all categories would be ranked highest. The criteria presently being considered include:

1. Revenues available for traffic improvements, including voluntary contributions to off-site improvements. This would include revenue projections from direct sources such as property tax, sales tax, hotel room tax and other sources as used in the Fiscal Implications of Core Area Alternative Futures report (ERA, 9/84). Voluntary contributions would be noted in addition to normal anticipated revenues.

FIGURE 6

PROPOSED
METERING
AREA

Walnut Creek
CORE AREA PLAN

2. Transportation Systems Management (TSM) participation and parking management programs.

3. Percentage of retail and/or residential uses.

4. Provision of pedestrian amenities, linkages and public open spaces. Included here would be seating, artwork, new pedestrian ways, street overcrossings, restrooms, sun protection, plazas, parks, landscaping, etc.

5. Projects having a low trip generation rate (to be defined).

6. Other public benefits. This could include such items as a theatre, gallery space, museums, libraries, additions to public buildings or land, or other unanticipated project amenities.

7. Application seniority. Projects would accumulate points according to the length of time they have been seeking approval through the metering process.

8. Owner occupied buildings.

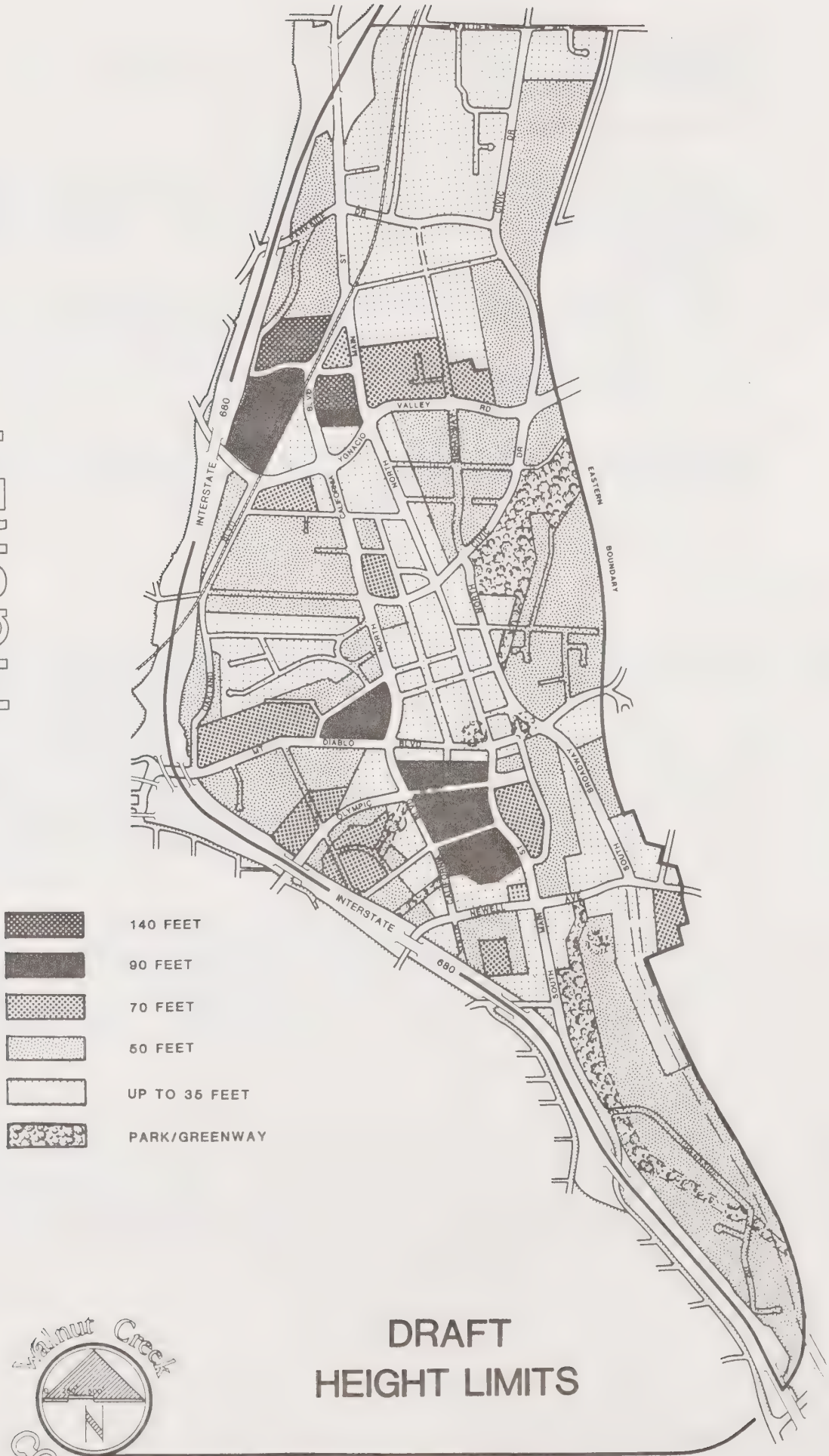
D. URBAN DESIGN

Figure 7 shows the Hearing Draft Height Limits. Figure 8 shows the height limit changes being considered by the City Council. The proposed changes in the Mt. Diablo Boulevard area reflect the Council's desire to promote design and development flexibility for high density multiple family uses. The Council was, however, concerned about the design implications of 90-foot high buildings along Mt. Diablo Boulevard. They wanted to encourage a stepped-back profile that would allow light and air to reach the street setback area and avoid a tunnel effect along the roadway edge. The Council Draft Plan will include a step-back discussion in the implementation section.

The second area where changes are being considered is on the Gemco parcel bounded by North Main Street, North California Boulevard, Ygnacio Valley Road and LaCassie Street. The Council wished to clarify their interpretation of height limits in the 1975 Core Area Plan as it pertained to views across the Gemco site from the Walnut Creek BART Station. The Council felt that the height limits in the Hearing Draft Plan were too restrictive and desired more design flexibility.

Finally, the City Council is considering changing building setbacks along North Main Street between East Street and Ygnacio Valley Road. The Hearing Draft Plan showed a minimal setback (See Figure 9) and the Council is considering moderate (See Figure 10). A moderate setback would allow for larger sidewalks, and landscaped areas and would distinguish the part of Main Street from the more pedestrian oriented area south of Civic Drive.

FIGURE 7



DRAFT
HEIGHT LIMITS

Walnut Creek
CORE AREA PLAN

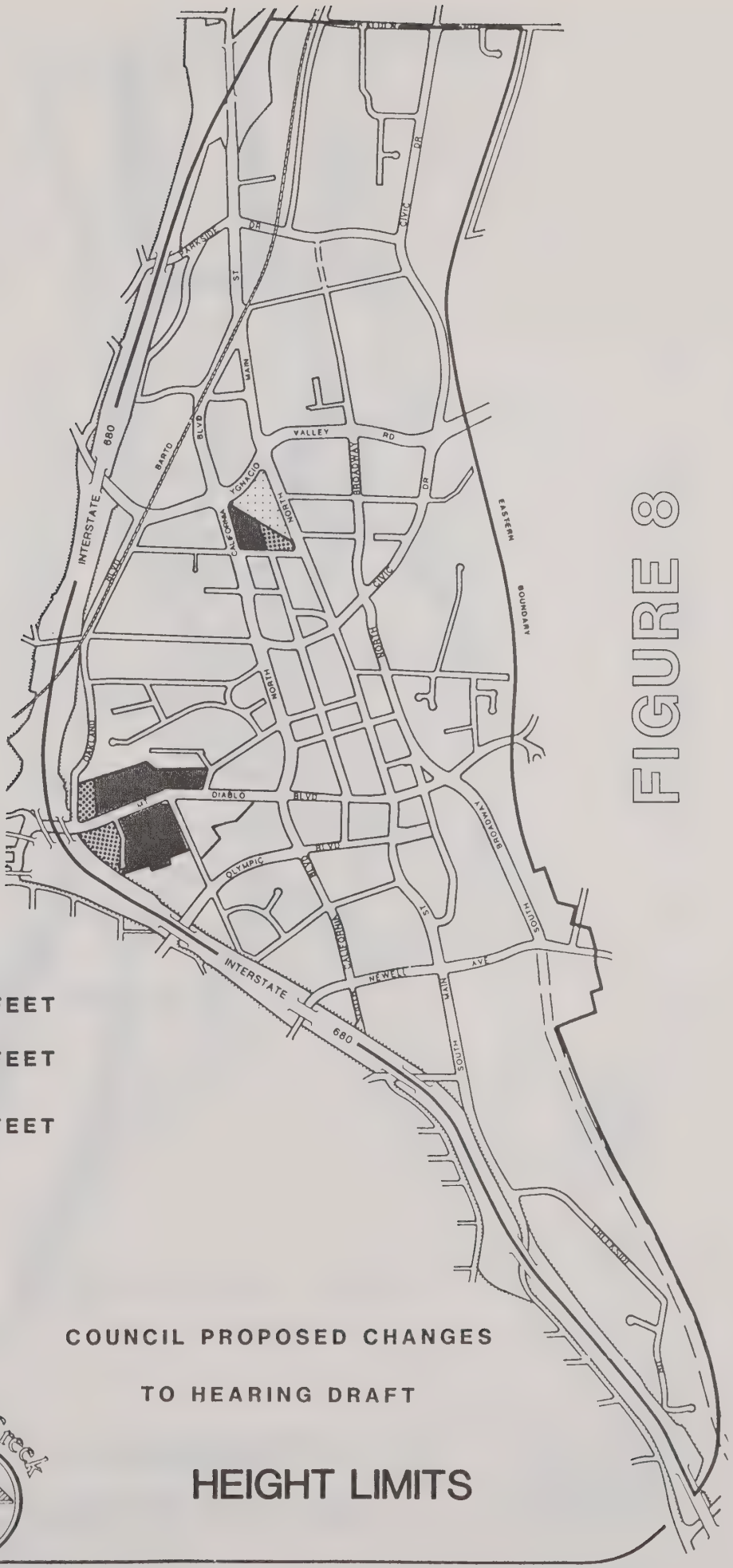


FIGURE 8

COUNCIL PROPOSED CHANGES

TO HEARING DRAFT

HEIGHT LIMITS

Walnut Creek

CORE AREA PLAN

FIGURE 9

DRAFT
BUILDING SETBACK

FIGURE 10

COUNCIL PROPOSED CHANGES

TO HEARING DRAFT

BUILDING SETBACK

E. TRAFFIC AND CIRCULATION

The Council Draft Plan incorporates the circulation elements and numerous roadway improvements identified in the Hearing Draft Plan with the exception of those pertaining to Ygnacio Valley Road Corridor. Figures 11 to 16 identify the circulation routes and improvements being considered. Table 1 lists the location of Hearing Draft street improvements excepted by the City Council (the figures identify circulation on Ygnacio Valley Road even though its configuration may change).

Table 1

Draft Plan Street Improvements

Arterials:

North Main Street - Ygnacio Valley Road to I-680,
North California Boulevard - Mt. Diablo Boulevard to N. Main Street,
North Broadway Extension - Pine Street to Parkside Drive,
South Broadway Extension - Rudgear Road to Newell Avenue,
Mt. Diablo Boulevard - North California to I-680,
Olympic Boulevard - California Boulevard to I-680,
South California Boulevard/South Main Street connection - Olympic Boulevard to Newell Avenue to Main Street

Collectors:

North Main Street - Lacassie Street to Ygnacio Valley Road,
Alpine Road - Olympic to Mt. Diablo Boulevards,
Riviera Avenue extension - Ygnacio Valley Road to Pringle Avenue

Local:

East Street - North Main to Locust Streets,
Carlback Avenue - Civic Drive to North Broadway.

Truck Routes:

North and South Main Streets, North and South California Boulevard, Newell Avenue, Ygnacio Valley Road, Mt. Diablo and Olympic Boulevards.

TABLE 1

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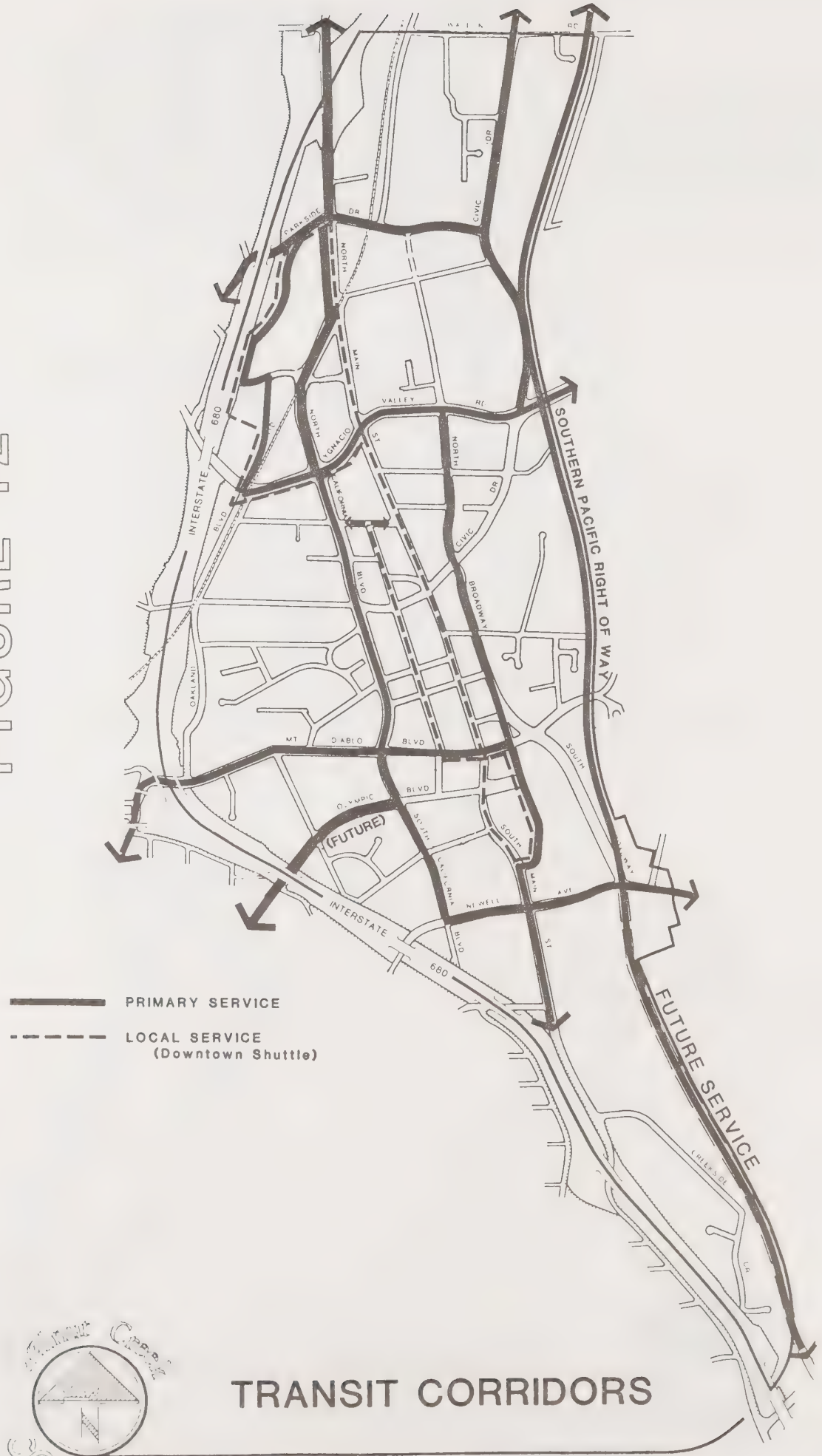
FIGURE 11

VEHICLE CIRCULATION

FIGURE 12



TRANSIT CORRIDORS

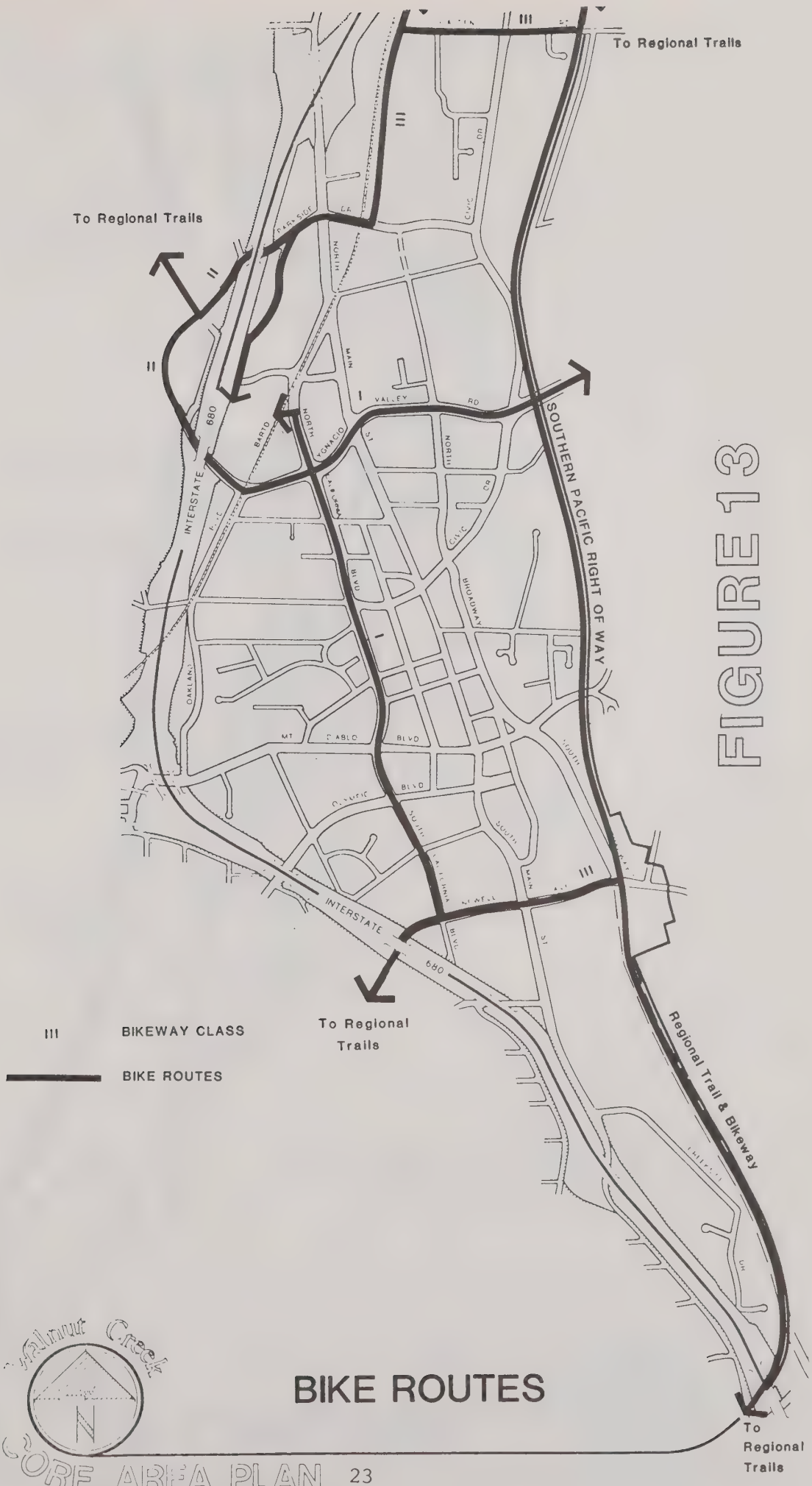


FIGURE 13

BIKE ROUTES

FIGURE 14

PEDESTRIAN WAYS

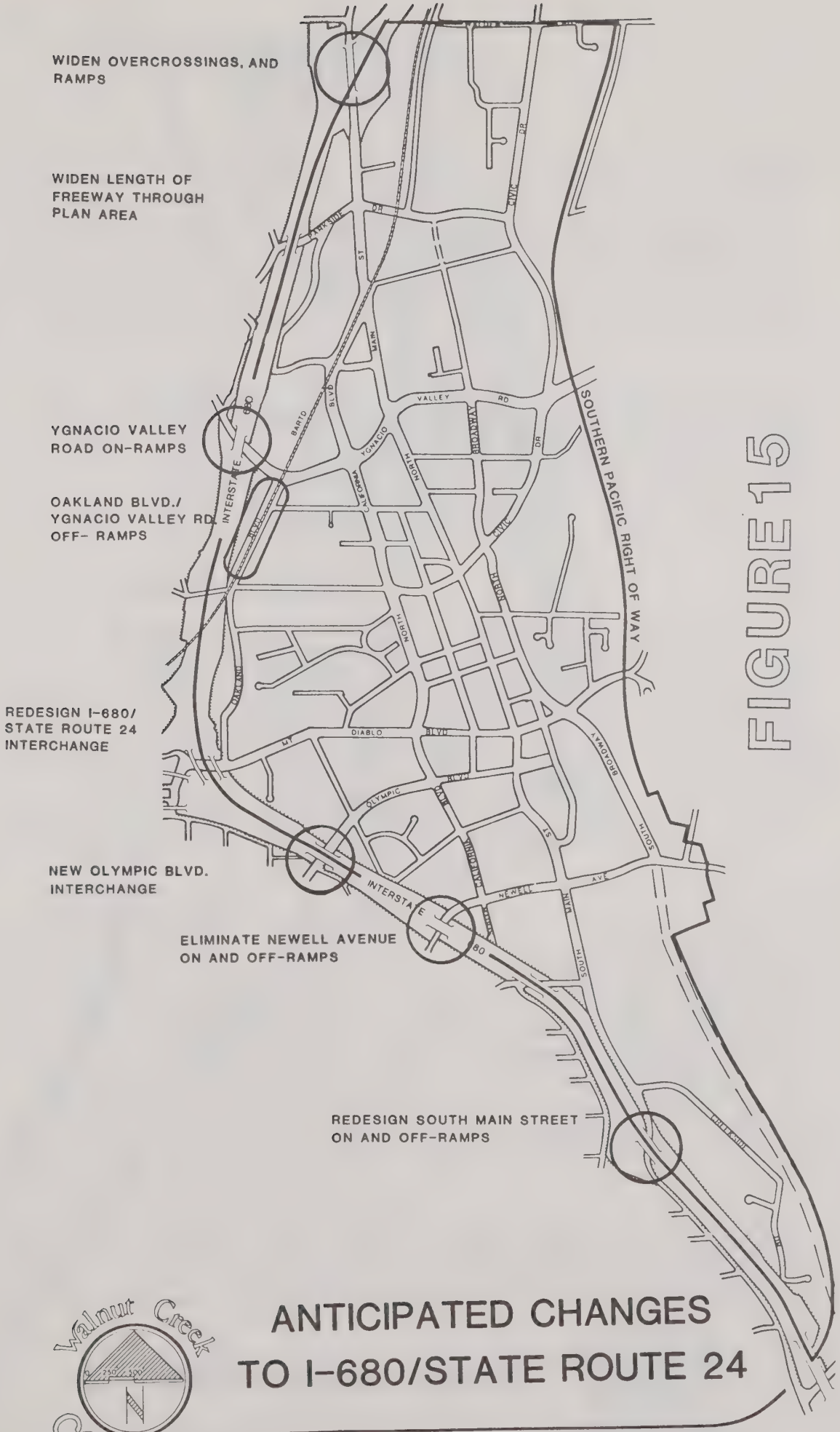


FIGURE 15

ANTICIPATED CHANGES TO I-680/STATE ROUTE 24

Walnut Creek CORE AREA PLAN

FIGURE 16

STREET IMPROVEMENTS

IV. ENVIRONMENTAL SETTING, SIGNIFICANT IMPACTS AND MITIGATION MEASURES

The Draft Environmental Impact Report, Volume II, described the environmental setting for existing streets and circulation system in the Core Area. This document, Draft Supplemental EIR, Volume IV, will describe the environmental setting, impacts and potential mitigation measures for three alternative roadway improvements being considered by the City Council. The three alternatives are: the at-grade Cross-Town Connection, the grade-separated Cross-Town Connection and the Arroyo Couplet with the at-grade Cross-Town Connection (See Figure 17).

In November 1985, subsequent to the Council's decision to prepare the Draft Supplemental EIR, the Traffic Control Initiative (Measure H) became effective in the City of Walnut Creek. The Initiative prohibits development throughout the City (with some exceptions) if traffic levels of service at specific intersections exceed the volume to capacity ratio of .85 (level of service "D"). This EIR will identify those intersections that are significantly effected by the provisions of the Initiative and will suggest possible mitigation.

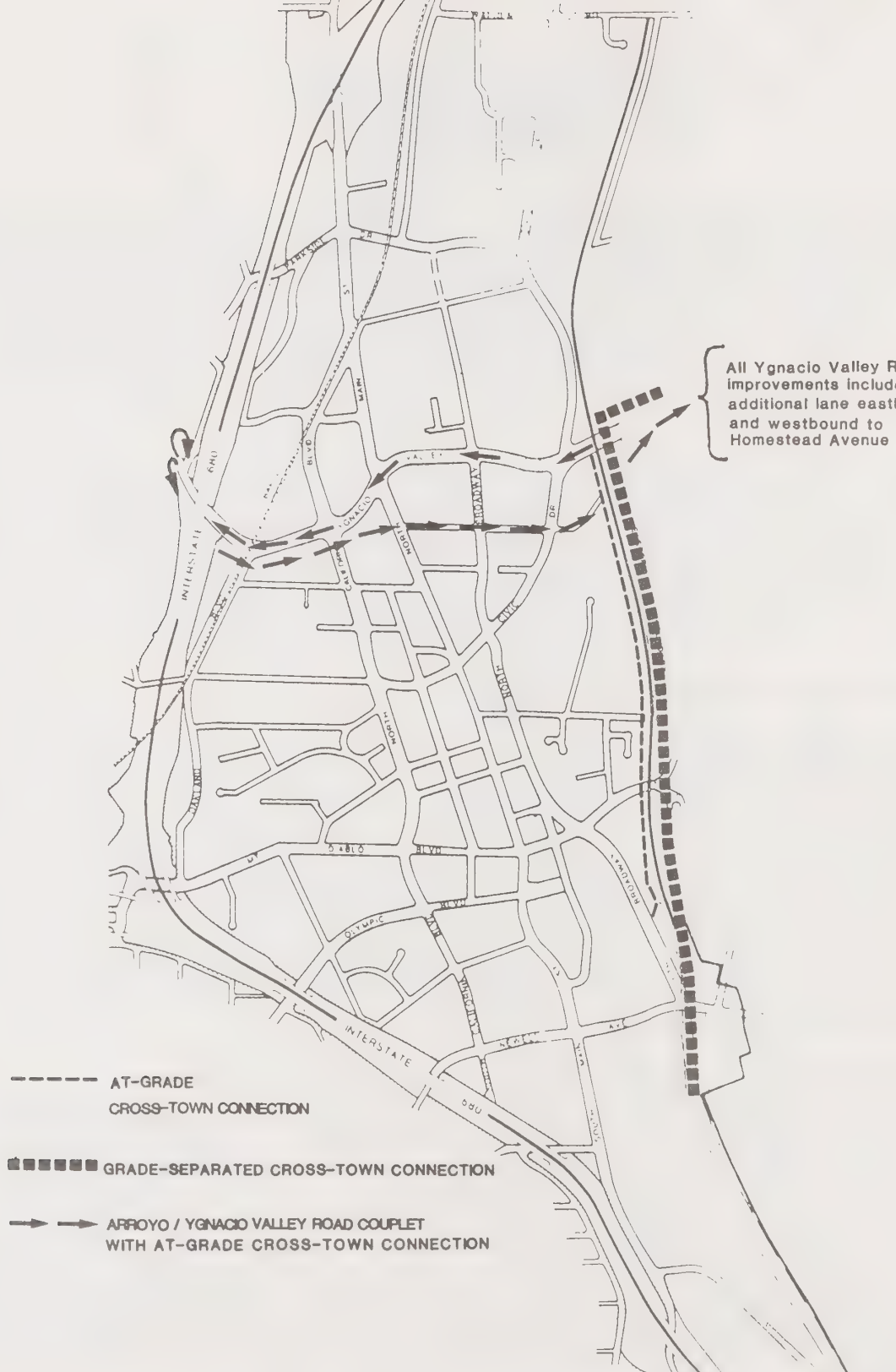
A. TRAFFIC AND CIRCULATION ALTERNATIVES

Environmental Setting - The City Council decision to assess the environmental impacts of the Cross-Town Connections and Arroyo Couplet was a result of information generated over several months and after numerous public meetings. The Council considered the recommendations of the Transportation and Planning Commissions, numerous Core Area property owners and Walnut Creek residents. They also considered the Core Area Origin and Destination Study, the Cross-Town Connection Feasibility Study, an executive summary of seven Ygnacio Valley Road corridor improvement options and traffic studies presented by Long's Drug Stores, Inc. (all of these reports are incorporated into the Technical Appendicies for the Supplemental Draft EIR, Volume III b).

Cross-Town Connections - The Connections are in essence a northern extension of the South Broadway Extension project. Extending South Broadway from Newell Avenue to Rudgear Road has been assumed throughout the Core Area Plan revision process and its effect on traffic circulation has been calculated in all traffic impact models. The project has been subject to a detailed environmental review process and on April 17, 1979, the Walnut Creek City Council certified the Final Environmental Impact Report. The City, however, is preparing an update of the Final EIR that will be available for public review and comment prior to the construction of the roadway. The Cross-Town Connection alternatives may modify the impacts of the South Broadway Extension and those impacts will be discussed in this report.

The Cross-Town Connections would be located within the Southern Pacific Right-of-Way from Ygnacio Valley Road to Newell Avenue. The Connections would share the right-of-way with several other public improvements, including the San Ramon Creek By-Pass Channel (a 32-foot wide concrete box

FIGURE 17



THREE YGNACIO VALLEY ROAD CORRIDOR IMPROVEMENTS BEING CONSIDERED BY THE CITY COUNCIL

flood control channel currently under construction), a regional trail/-bicycle facility (currently funded by Caltrans), utility corridor (water and sewers), and a future County transit corridor. The Southern Pacific Pipeline Company will also maintain its current use of the right-of-way as a petroleum pipeline corridor.

Land uses adjacent to the Southern Pacific Right-of-Way between Ygnacio Valley Road and Mt. Diablo Boulevard are primarily residential with some office and retail commercial uses abutting the right-of-way just south of Ygnacio Valley Road and on the north side of Mt. Diablo Boulevard. For that section between Mt. Diablo Boulevard and Newell Avenue, office and retail commercial uses lie to the west of the right-of-way, while residential uses are located east of the right-of-way except on the north side of Newell Avenue where a retail shopping center exists.

Residential uses which abut and face the right-of-way are located on Bradley Avenue, Greenway and Norlyn Drives, Sharenne Lane, Walker Avenue, Carmel Drive, Mt. Pisgah Road, Village Court, Lincoln Avenue, Miranda Drive and Holcomb Court. Many residents on these streets would have living spaces impacted by future uses within the Southern Pacific Right-of-Way.

Arroyo Couplet - The Arroyo Couplet is proposed in conjunction with the at-grade Cross-Town Connection. The eastbound Arroyo segment would be located on the existing Arroyo Way right-of-way from North Main Street to Civic Drive, the extension of Arroyo Way to the Southern Pacific Right-of-Way and from there, eastward on top of the Walnut Creek Channel to Ygnacio Valley Road. West of North Main Street a new right-of-way would have to be acquired from the Gemco parcel and a new roadway constructed from North California Boulevard to North Main Street. Land uses abutting this portion of Arroyo between North California Boulevard and the Southern Pacific Right-of-Way would be office and retail commercial uses. Between the Southern Pacific right-of-way and Ygnacio Valley Road, residential uses would be located on the south side of the couplet adjacent to Bradley Avenue and office uses on the north side adjacent to Ygnacio Valley Road.

The westbound segment of the Couplet would be located within the existing Ygnacio Valley Road right-of-way from the Walnut Creek Channel bridge to North California Boulevard. Land uses abutting the roadway would include office and retail commercial uses and a PG&E substation. Full use of the existing right-of-way would not be required to accommodate the proposed one-way street, therefore, it is proposed that a landscaped greenway be installed to provide adequate pedestrian and bicycle facilities and visual amenities.

Impacts

Beneficial Impacts - The three alternative improvements would provide improved access to the Broadway Plaza and Town Centre areas, would divert approximately 20% of traffic from Ygnacio Valley Road and would provide an alternative route for Walnut Creek residents and regional through traffic destined between Ygnacio Valley and points south of the Core Area.

The Arroyo Couplet option including the at-grade Cross-Town, would additionally improve north-south traffic and left turn movements at the

North Main, North Broadway and Civic intersections on Ygnacio Valley Road. It would also create surplus right-of-way to construct a portion of the Ygnacio Valley Road greenway.

Adverse Impacts - Traffic impacts generated by the level of development anticipated under the City Council Draft Plan are calculated as intersection levels of service for AM and PM Peak Hours. They are shown on Tables 2 and 3. In Column 2 (Future Year 2000) it is assumed that all Core Area street improvements (mitigation measures) as described on page 20 will have been implemented. The additional level of mitigation that can be achieved by the three alternative improvements is discernable from the three columns labeled "Alternatives."

The tables show that travel demand under existing conditions and by the Year 2000 with or without the alternatives exceed the capacity of numerous intersections (where ratio is greater than 1.00). When demand exceeds capacity several impacts may occur;

* Drivers may divert to other routes, if they exist;

* Drivers may form traffic queues causing a lengthening of the peak hour;

* Drivers may change their mode of transportation if other alternatives are available;

* Drivers may change the time trips are made; and

* Drivers may change their living or employment situations to avoid making any trips in the corridor.

The following list of intersections simplifies the tables and indicates where significant adverse impacts may occur during the peak hours. The Arroyo Couplet with the at-grade Cross-Town Connection provides the best possible mitigation of these alternatives, although sixteen intersections along North Main Street, Ygnacio Valley Road, the Cross-Town Connection, Mt. Diablo Boulevard and Newell Avenue are projected to function at undesirable levels of service; "E" and "F".

AM Peak Hour Intersections	Year 2000	Alternatives At grade	Grade Sep	Arroyo
North Main & I-680 Off-ramp	F	F	F	F
North Main & Parkside	F	F	F	F
Oakland & Y.V. Rd.	E	C	C	C
North California & Y.V. Rd.	F	D	D	D
North Main & Y.V. Rd.	F	F	F	D
North Broadway & Y.V. Rd.	F	F	F	C
Civic & Y.V. Rd.	F	F	F	C
Broadway & Mt. Diablo	E	F	F	F
Cross-Town & Mt. Diablo	-	C	E	F
South California & Olympic	E	E	D	E
South Broadway & Newell	D	E	C	E
Walnut & Y.V. Rd.	F	D	D	D
Homestead & Y.V. Rd.	F	F	F	F

PM Peak Hour Intersections	Year 2000	Alternatives At grade	Grade Sep	Arroyo
North Main & San Luis	F	E	E	E
North Main & Parkside	F	F	F	F
North Main & Pringle	E	E	E	E
Oakland & Y.V. Rd.	E	D	D	D
North California & Y.V. Rd.	F	E	E	E
North Main & Y.V. Rd.	F	F	F	D
North Broadway & Y.V. Rd.	F	F	F	D
Civic & Y. V. Rd.	F	F	F	D
Cross-Town & Y.V. Rd.	-	F	-	-
North Main & Civic	E	C	C	C
North Broadway & Civic	E	C	C	C
Arroyo & Civic	-	-	-	E
Arroyo & Cross-Town Connection	-	-	-	E
California & Mt. Diablo	F	F	F	F
Main & Mt. Diablo	F	F	F	F
Broadway & Mt. Diablo	F	F	F	F
Cross-Town & Mt. Diablo	-	F	D	F
South California & Olympic	F	F	F	F
South Broadway & Newell	F	F	C	F
Rudgear & S.B. I-680 On-ramp	E	F	F	F
Walnut & Y.V. Rd.	F	F	F	F
Homestead & Y.V. Rd.	F	F	F	F

The tables show that existing and future conditions result in volume to capacity of ratios of .85 or greater at nearly all Ygnacio Valley Road, Main Street, California Boulevard, Broadway and Mt. Diablo Boulevard intersections. This level of traffic congestion is inconsistent with the provisions of the Traffic Control Initiative and is considered to be a significant impact. It should be noted, that future conditions are based on projected traffic demand and probably would not occur because the Initiative would prohibit development that causes volume to capacity ratios in excess of .85.

The City's traffic consultant considered numerous roadway widenings and redesigns in an attempt to mitigate the "E" and "F" service levels at numerous intersections. In all cases the "improvements" created the need for significant right-of-way purchases, demolitions and/or relocations. They resulted in significant adverse impacts to people, properties and businesses and substantially increase improvement costs. The intersections considered were: North Main Street/I-680 off-ramp and Parkside Drive; Ygnacio Valley Road/North California Boulevard, North Main Street, North Broadway and Civic Drive; Mt. Diablo/California Boulevard, Main Street, Broadway and Cross-Town; South California /Olympic Boulevard, South Broadway/Newell Avenue and Rudgear Road/I-680 on-ramp.

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Table 2

AM PEAK HOUR INTERSECTION SERVICE LEVELS

Levels of Service and Volume/Capacity Ratios

No.	Intersection	Exist[1] Year 1985	Future[2] Year 2000	Alternatives: At Grade	Alternatives: Grade Sep.	Alternatives: Arroyo Couplet
	Main & N.B. I-680 Off-ramp	F 1.09	F 1.40	F 1.30	F 1.30	F 1.30
	Main & Parkside	F 1.01	F 1.03	F 1.03	F 1.03	F 1.05
	Main & California	A 0.53	D 0.82	D 0.82	D 0.82	D 0.84
	Main & Pringle	N/A	D 0.82	D 0.82	D 0.82	D 0.84
	Oakland & Y.V.R.	C 0.77	E 0.92	C 0.79	C 0.79	C 0.79
	California & Y.V.R.	F 1.30	F 1.00	D 0.87	D 0.87	D 0.87
	Main & Y.V.R.	D 0.86	F 1.21	F 1.06	F 1.06	D 0.81
	Broadway & Y.V.R.	D 0.85	F 1.11	F 1.01	F 1.01	C 0.75
	Civic & Y.V.R.	C 0.77	F 1.22	F 1.01	F 1.01	C 0.79
	Cross-town & Y.V.R.	---	---	C 0.75	---	---
	Arroyo & Main	A 0.21	N/A	N/A	N/A	B 0.61
	Arroyo & Broadway	A 0.16	N/A	N/A	N/A	A 0.59
	Arroyo & Civic	A 0.21	N/A	N/A	N/A	A 0.49
	Arroyo & Cross-town	---	---	---	---	C 0.73
	California & Mt. Diablo	B 0.61	C 0.75	D 0.86	D 0.86	D 0.87
	Main & Mt. Diablo	A 0.46	C 0.77	D 0.88	E 0.90	D 0.88
	Broadway & Mt. Diablo	A 0.57	E 0.95	F 1.12	F 1.13	F 1.12
	Cross-town & Mt. Diablo	---	---	C 0.78	E 0.97	F 1.06
	California & Olympic	A 0.46	E 0.91	E 0.91	D 0.88	E 0.91
	Broadway & Newell	B 0.65	D 0.85	E 0.97	C 0.79	E 0.97
	Main & Lilac	D 0.84	A 0.51	A 0.51	A 0.51	A 0.51
	Main & Creekside	E 0.93	B 0.60	B 0.60	B 0.60	B 0.60
	SB I-680 On-ramp & Rudgear	---	A 0.51	A 0.58	A 0.58	A 0.58
	NB I-680 Off-ramp & Rudgear	A 0.32	B 0.64	D 0.86	D 0.86	D 0.86
	Walnut & Y.V.R.	D 0.88	F 1.13	D 0.89	D 0.89	D 0.89
	Homestead & Y.V.R.	D 0.87	F 1.23	F 1.23	F 1.23	F 1.23
	Bancroft & Y.V.R.	F 1.04	F 1.12	F 1.12	F 1.12	F 1.12

TABLE 2

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1 Existing streets with North Broadway Extension; source: DKS Associates.

2 Includes Caltrans improvements to I-680, South Broadway Extension, and all improvements previously identified in the Council Draft Plan except Pringle Couplet.

3 Arroyo Couplet includes the at-grade Cross-Town Connection.

Source: PRC Engineering, October 1985

Table 3

PM PEAK HOUR INTERSECTION SERVICE LEVELS

Levels of Service and Volume/Capacity Ratios

No. Intersection	Exist[1] Year 1985	Future[2] Year 2000	------- Alternatives ------ At Grade	Grade Sep.	Arroyo Couplet
Main & San Luis	N/A	F 1.05	E 0.92	E 0.92	E 0.92
Main & Parkside	E 0.99	F 1.11	F 1.09	F 1.09	F 1.09
Civic & Parkside	C 0.74	C 0.75	C 0.75	C 0.75	D 0.81
Main & California	C 0.74	D 0.82	D 0.82	D 0.82	D 0.82
California & Pringle	N/A	D 0.82	D 0.82	D 0.82	D 0.82
Main & Pringle	N/A	E 0.90	E 0.90	E 0.90	E 0.91
S.B. I-680 On-rmp & Y.V.R.	B 0.86	E 0.92	C 0.73	C 0.73	C 0.73
Riviera & Y.V.R.	---	D 0.89	C 0.77	C 0.77	C 0.77
Oakland & Y.V.R.	F 1.14	E 0.93	D 0.80	D 0.80	D 0.80
California & Y.V.R.	F 1.04	F 1.13	E 0.92	E 0.92	E 0.92
Main & Y.V.R.	E 0.91	F 1.25	F 1.08	F 1.08	D 0.89
Broadway & Y.V.R.	D 0.89	F 1.15	F 1.10	F 1.10	D 0.82
Civic & Y.V.R.	F 1.09	F 1.50	F 1.22	F 1.22	B 0.67
Cross-town & Y.V.R.	---	---	F 1.07	---	---
Main & Civic	A 0.55	E 0.98	C 0.72	C 0.72	C 0.70
Broadway & Civic	C 0.73	E 0.92	C 0.72	C 0.72	C 0.72
Arroyo & Main	A 0.38	N/A	N/A	N/A	D 0.89
Arroyo & Broadway	A 0.31	N/A	N/A	N/A	D 0.83
Arroyo & Civic	A 0.48	N/A	N/A	N/A	E 0.99
Arroyo & Cross-town	---	---	---	---	E 0.98
California & Bonanza	D 0.85	D 0.88	C 0.73	C 0.73	C 0.73
Mt. Diablo & SR 24	D 0.86	D 0.87	D 0.88	D 0.88	D 0.88
Oakland & Mt. Diablo	B 0.69	D 0.86	D 0.86	D 0.86	D 0.86
California & Mt. Diablo	E 0.94	F 1.09	F 1.29	F 1.29	F 1.30
Main & Mt. Diablo	C 0.75	F 1.02	F 1.24	F 1.24	F 1.24
Broadway & Mt. Diablo	C 0.77	F 1.01	F 1.20	F 1.30	F 1.20
Cross-town & Mt. Diablo	---	---	F 1.24	D 0.88	F 1.24
California & Olympic	C 0.73	F 1.18	F 1.17	F 1.17	F 1.17
Main & Newell	F 1.01	C 0.74	C 0.72	C 0.72	C 0.72
Broadway & Newell	D 0.81	F 1.03	F 1.04	C 0.78	F 1.04
Main & Lilac	D 0.82	A 0.59	A 0.59	A 0.59	A 0.59
Main & Creekside	D 0.89	C 0.72	C 0.72	C 0.72	C 0.72
SB I-680 On-ramp & Rudgear	---	E 0.90	F 1.00	F 1.00	F 1.00
NB I-680 Off-ramp & Rudgear	A 0.25	A 0.48	C 0.70	C 0.70	C 0.70
Walnut & Y.V.R.	D 0.88	F 1.44	F 1.17	F 1.17	F 1.17
Homestead & Y.V.R.	D 0.87	F 1.57	F 1.57	F 1.57	F 1.57
Bancroft & Y.V.R.	F 1.04	F 1.00	F 1.00	F 1.00	F 1.00

[1] Existing streets with North Broadway Extension· source; DKS Associates

[2] Includes Caltrans improvements to I-680, South Broadway Extension, and all improvements previously identified in the Council Draft Plan except Pringle Couplet.

[3] Arroyo Couplet includes the at-grade Cross-Town Connection.

Source: PRC Engineering, October 1985

TABLE 3

Traffic Volume Impacts

Traffic volumes for the existing Base 1985 case and the three improvement options by the Year 2000 are shown in Figures 18, 19 and 20. In all cases the Cross-Town Connections reduce the volume of traffic just east of Ygancio Valley Road/Civic intersection by 5-10 per cent. Along Mt. Diablo Boulevard, however, traffic volumes would increase by more than 100%. The substantial increase in traffic on Mt. Diablo Boulevard is the result of (1) traffic diverting to Mt. Diablo Boulevard between Highway 24 and the Cross-Town Connections and (2) traffic within the pedestrian retail core using the Connections instead of the Broadway/Civic or North California/Ygnacio Valley Road routes. The significant increase in traffic on Mt. Diablo Boulevard will adversely impact pedestrian movements and safety and may reduce the desirability of pedestrian activities in the Broadway Plaza and Main/Locust Street retail areas.

The Cross-Town options would also significantly increase traffic volumes on the South Broadway Extension. The Final EIR for the South Broadway Extension indicates that if the Broadway/Newell intersection were to operate at PM peak hour levels of service "E," South Broadway Extension could carry as many as 18,000 ADT (average daily trips). Figure 18 shows that the traffic demand on South Broadway Extension with the Connections could be as high as 3,150 PM peak hour vehicles. This translates to approximately 39,400 ADT or nearly double the average daily trips anticipated in the South Broadway Extension Final EIR. Simply stated, this means that the traffic demand would be substantially greater than the capacity of the roadway and would result in the "F" level of service at the Broadway/Newell intersection. Additionally, travelers desiring to use South Broadway Extension would divert to other routes during the peak hour including South Main Street, I-680, and possible circuitous routes through the residential neighborhood to the east.

Cumulative Adverse

The levels of development being considered by the Council, while substantially reduced from those of the Reference Plan level, and slightly higher than those considered in the Hearing Draft would continue to add cumulatively to traffic impacts on the I-680/24 freeway system.

Short-Term Impacts

The proposed Caltrans improvements to the I-680/24 freeway system would cause short term impacts resulting in periods of severe traffic congestion, traffic diversion, street and ramp closures in the Core Area. Caltrans is in the process of preparing an environmental impact statement that should address the severity of these problems.

Mitigation Measures:

1. While the Arroyo Couplet provides the best possible mitigation of the three alternatives considered, a comparison of couplets in the Alternative Section, page 56 indicates that other one-way couplet systems provide an even greater level of traffic mitigation. The City should consider all couplet alternatives and also consider levels of development lower than presently being proposed.

2. The City will undertake a comprehensive City-wide traffic circulation study and establish policy and/or roadway improvement alternatives which address the Traffic Control Initiative provisions.

3. The City will continue to study improvements to Ygnacio Valley Road east of the Core Area and work at the regional level to identify roadway and transit improvements including Regional, State, and Federal funding mechanisms.

4. The City will continue to work with Caltrans to plan for improvements to the I-680/24 freeway system that will accommodate the increased traffic demand.

5. The City will monitor the Caltrans environmental review process for the I-680/24 Improvement Project and work with Caltrans to minimize construction related impacts.

Mitigation Alternative

1. Although contrary to the Traffic Control Initiative, the City could amend its policy regarding levels of service and accept higher levels of congestion (i.e.,lower levels of service) during peak hours.

2. The City could adopt an ordinance to reduce required parking or establish a parking "cap" for downtown office uses in an attempt to reduce the number of vehicles destined for the Core Area.

3. The City could substantially reduce development potential throughout the Core Area.

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FIGURE 18

SCALE: 1inch≅10,000 PM PEAK Peak Hour Vehicles

Year 2000 With Improvements

SOURCE: PRC Engineering,1985

TRAFFIC VOLUMES

AT-GRADE CROSS-TOWN CONNECTION

FIGURE 19

SCALE: 1inch ≅ 10,000 PM Peak Hour Vehicles

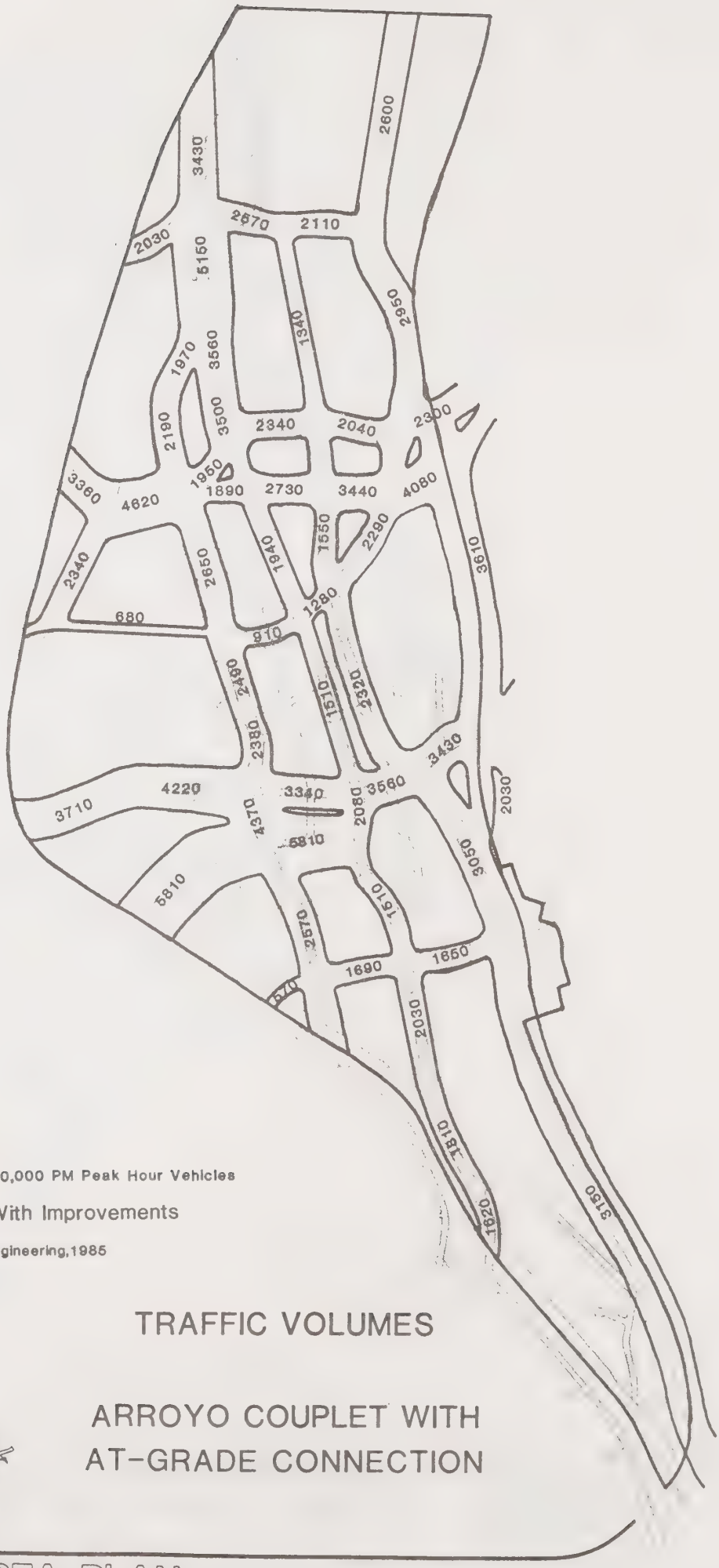
Year 2000 With Improvements

SOURCE: PRC Engineering,1985

TRAFFIC VOLUMES

GRADE-SEPARATED CROSS-TOWN CONNECTION

FIGURE 20



SCALE: 1inch ≅ 10,000 PM Peak Hour Vehicles

Year 2000 With Improvements

SOURCE: PRC Engineering,1985

TRAFFIC VOLUMES

ARROYO COUPLET WITH AT-GRADE CONNECTION

Walnut Creek CORE AREA PLAN

B. NOISE

Environmental Setting

An explanation of Noise Element standards and existing environmental setting can be found on page 84 of the Draft Environmental Impact Report, Volume II.

Noise impacts for the Council Draft Plan and the three alternative roadway networks discussed in this Supplemental EIR were analyzed with the same study model used in the Draft EIR, Volume II, pages 84-91. Additional considerations were the effects of proposed roadway elevations. Traffic volumes studied in the model are applicable to the year 2000. Medium duty trucks comprise four percent and heavy duty trucks comprise two percent of the vehicles on the roadways in this study for the following segments of roadways:

Ygnacio Valley Road - east of Civic Drive;
Cross-Town Connection - Mt. Diablo Boulevard to Ygnacio Valley Road - Newell Avenue to Mt. Diablo Boulevard; and South Broadway/Rudgear Road to Newell Avenue.

Impacts

Figures 21, 22, 23 and 24 illustrate noise contours for the following cases:

(1) Base condition (1985);
(2) At-grade Cross-Town Connection (year 2000);
(3) Grade-separated Cross-Town Connection (year 2000); and
(4) Arroyo couplet with at-grade Cross-Town Connection (year 2000).

Areas in excess of 70 dBA (CNEL) are shown by shading in the figures.

Sensitive receptors affected by the planned roadway improvements include residential developments and existing school facilities along Ygnacio Valley Road, adjacent to the Cross-Town Connection and along South Broadway. Summary of impacts is presented below:

Residential areas, school facilities and Civic Park along each of the roadway segments are exposed to sound levels in excess of 60 dBA (CNEL). The predicted 60dBA contour in these areas extends to a distance of up to approximately 500 feet from the center line of the adjacent roadway and would effect the following number of people.

Residential:	975 single and multiple family units = 1400 people
School:	1950 students
Civic Park:	2040 annual ballfield participants

The most impacted residents will be exposed to sound levels in the 70 to 72 dBA range. This may involve 350 to 400 people in the Ygnacio Valley Road to Newell Avenue segment.

In the area of South Broadway Extension approximately 1450 to 1500 residents and 425 students would be subject to higher noise levels due to a doubling of traffic volumes on this portion of the roadway.

FIGURE 21

SOURCE: EARTH METRICS INC.,1985

NOISE LEVELS FOR BASE CONDITION(1985)

FIGURE 22

SOURCE: EARTH METRICS INC., 1985

NOISE LEVELS FOR AT-GRADE CONNECTION (2,000) 41

FIGURE 23

SOURCE: EARTH METRICS INC., 1985

NOISE LEVELS FOR GRADE-SEPARATED CONNECTION (2,000)

FIGURE 24

SOURCE: EARTH METRICS INC.,1985

NOISE LEVELS FOR AT-GRADE CONNECTION WITH ARROYO COUPLET (2,000)

Specific feasibility for additional development in high noise zones should be determined by individual acoustical studies incorporating on-site noise measurements and mitigation measures to attain suitable living environments. On-site noise measurements would not be redundant with the noise contours because the noise contours are generalizations of the outdoor noise environment that can be accurately refined by noise measurements.

Multiple family residences would be subject to acoustical requirements pursuant to Title 25 of the California Administrative Code.

Noise Impact in Previous EIR's

Residential uses in the Alma Avenue, Creekside Drive, Oakland Blvd. and Golden Triangle areas would be impacted by noise levels generated from I-680. Also, Kaiser Hospital and the existing private school and convalescent facility on the south side of Mt. Diablo Blvd. would continue to have exposure to high noise levels from I-680 and the widening of Mt. Diablo Blvd. that exceed City Noise Element standards. Potential future residential use on the Las Lomas High School site would be subject to future noise levels as specified above. The Walnut Creek Elementary School District office and school facilities would be subject to increasing noise exposure due to the proposed increase traffic volumes on Ygnacio Valley Road.

Construction Noise

Short-term noise impacts would result from construction activity along the proposed roadway segments. Construction noise, which includes noise from the operation of heavy paving equipment, trucks and other equipment, would increase ambient noise levels in the construction vicinity. Major sources of construction noise and the typical "A" weighted sound level at 50 feet are: dump trucks (88), portable air compressors (81), concrete mixer (85), pile driver (101), jack hammer (88), bulldozer (87), paver (89), pneumatic tools (85), and backhoes (85) (source EPA, 1971). The impact of construction noise would be temporary and confined to specific areas at a time.

Mitigation Measures:

1. New Single-family Residential Areas - The City of Walnut Creek should require acoustical studies for residences to be located in any area having noise levels that exceed 60dBA (CNEL). For the purpose of preliminary evaluation, the Core Area Noise Contour Maps should be consulted. On-site noise measurements should be performed by a qualified acoustical engineer and appropriate mitigation measures recommended that would attenuate noise levels to Walnut Creek Noise Element Interior Standards. Materials, specifications and construction methods should be verified by the Walnut Creek Building Code Enforcement Division.

2. Multiple-family Residential Areas -

   (a) Acoustical studies are required by the California State Administrative Code Title 25 to provide suitable living environments in muliple-family units. The City of Walnut Creek

enforces this requirement through the normal planning and design review process.

(b) The City should require acoustical architectural design and site planning for multiple-family units in the vicinity of I-680, BART, the future I-680/24 interchange and ramp areas, along the Cross Town Connection and along South Broadway to maximize sound shielding by intervening structures and the use of buffered areas and attenuation of interior noise levels to Walnut Creek Noise Element Standards.

3. Existing Residences - Acoustical studies, including field tests of exterior to interior sound penetration, should be made on selected existing single family and multiple family residences in the proposed Cross-Town Connection and Arroyo Couplet corridor. Studies would be used to determine the potential need for retrofit sound mitigation measures. This applies to residences located in the zone above the 65 dBA CNEL contour.

4. Commercial Uses - Future commercial uses in areas having noise levels in excess of 70dBA (CNEL) should have an evaluation of building plans and cross sections by a qualified acoustical engineer. Certain uses such as auto-related uses may not necessitate plan evaluation.

5. Other Sensitive Receptors - The following land uses should be subject to professional acoustical engineering study at the time of additions or new development is reviewed by the City or prior to any major roadway improvements or widenings in the vicinities of these uses: Kaiser Hospital, Las Lomas High School, private schools, Walnut Creek Elementary School District offices and school facilities, and convalescent homes or hospitals.

6. The planned widening of the I-680/24 interchange is likely to impact on existing residental areas and other sensitive receptors. The City should monitor the environmental studies being prepared by Caltrans for a clear identification of impacts and mitigation measures as appropriate.

7. Roadway Effects - To minimize noise and vibration associated with the roadway surface, the surface should be maintained as smooth and level as feasible and practical within the safety margin.

8. Construction Noise - The following mitigation measures will reduce the temporary adverse impacts associated with construction activity:

   - To minimize the noise impact of construction, all construction related vehicles and equipment will be properly muffled.

   - Construction activities at the project site will be restricted to the weekday hours of 7 A.M. and 6 P.M. to minimize disturbance to local residents.

- Inform the public of proposed construction timelines to minimize potential annoyance related to construction noise. This is important for homes within a few hundred feet of construction activity.

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C. AIR QUALITY

The draft and final EIR's presented analysis of carbon monoxide, nitrogen oxides, hydrocarbons, particulates and sulfur oxides for Base 1985, and several levels of development. The results indicated that emissions for carbon monoxide, nitrogen oxides and hydrocarbons would be expected to decrease by the year 2,000 from Base 1985 levels. The decrease is attributed to California State Exhaust Emissions requirements currently in effect.

Background and roadside levels of carbon monoxide were also modeled for a Core Area wide grid system. In all cases, by the year 2,000, federal standards were not exceeded. An additional air quality analysis was conducted for a carbon monoxide line source analysis and composite idle emission rates for the Hearing Draft Plan. The results showed that congested intersections under Base 1985 conditions (levels of service "E" or "F") may exceed the state eight hour standard and may approach but not exceed the one hour standard. By the year 2,000 on the other hand, all intersections studied fell well below both the eight hour and one hour state standards.

An intersection operating at level of service "F" causes vehicles to stop an average of one minute or more before clearing an intersection. Roadway improvements and transportation measures that improve service levels therefore would minimize idle emission rates. In the Walnut Creek Core Area, idle emissions will comprise approximately 20-30 percent of the total vehicular emissions in the year 2,000.

Environmental Setting

Bay Area Air Quality Management District. Air monitoring station nearest the Core Area is in Concord, California. Table 4 indicates the number of days relevant air quality standards were exceeded at that station in recent years.

Council Draft Impacts

The estimated daily emissions of carbon monoxide (CO) in the Walnut Creek Core Area by the year 2,000 is approximately eight tons per day. These emissions were input to a box model (Hanna, 1971) which predicted a carbon monoxide background level of 3.5 parts per million (ppm).

Ambient carbon monoxide levels were predicted using a Gaussian line model at four roadside locations. The worst case meteorlogical assumptions made were D stability and one meter per second wind speeds. The eight hour CO standard is 9 ppm and the one hour standard is 20 ppm. Table 5 represents the results of the modeling. The CO levels shown are in agreement with those projected for the Bay Area by BAAQMD (Roggenkamp, 1985).

Cumulative Impacts

Based on the CO line source analysis neither the eight hour or one hour State Standards are exceeded, however, continued levels of traffic congestion resulting from "E" and "F" levels of service may result in a deterioration of CO levels and long-term cumulative adverse impacts.

Mitigation Measures

1. The City should consider additional roadway improvements that would reduce the number of intersections anticipated to function at levels of service "E" or "F".

2. TSM programs and ordinance adoption suggested in the Council draft plan should be implemented to reduce the level of vehicular emissions. The TSM program should specify the obligations of developers, property owners and/or major employers for support of ride-sharing, transit, flex-time and bicycle use.

3. California exhaust emission regulations currently in effect will reduce the incidence of carbon monoxide, carbon oxides and hydrocarbon impacts by the year 2,000.

4. Short term construction related dust control measures should be implemented as outlined in Table 6.

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TABLE 4. AIR QUALITY RECORD FOR 1980 TO 1984

AIR POLLUTANT	STATE (S) OR FEDERAL (F) STANDARD	NUMBER OF DAYS OF STANDARD EXCEEDANCE 1980	1981	1982	1983	1984
Ozone	0.12 ppm for one hour (F)	3	2	1	4	3
Carbon Monoxide	9 ppm for eight hours (F)	0	0	0	0	0
Nitrogen Dioxide	0.25 ppm for one hour (S)	0	0	0	0	0
Particulates	100 ug/m3 for 24 hours (S): 1980-1983 150 ug/m3 for 24 hours (F): 1984	8	1	2	0	0
Particulates	60 ug/m3 annual geometric mean (F)	49(a)	44(a)	41(a)	38(a)	56(a)

ppm: parts per million
ug/m3: micrograms per cubic meter
(a): Numbers reported are annual geometric means, not days of exceedance

Source: San Francisco Bay Area Quality Management District, 1980-1984.

TABLE 4

TABLE 5. PREDICTED WORST CASE OF CARBON MONOXIDE LEVELS (PPM) AT 50 FEET FROM SELECTED ROADS IN THE PROJECT VICINITY

ROADWAY	SEGMENT[a]	ALTERNATIVES 1+2(b) 8 HR.	1 HR.	ALTERNATIVE 3(c) 8 HR.	1 HR.
Ygnacio Valley Road	East of Civic Drive	7.4	12.8	5.0	9.3
Cross Town Connection	Mt. Diablo Blvd. to Ygnacio Valley Road	5.6	10.1	5.6	10.1
Arroyo Couplet	East of Civic Drive	Not Applicable		6.7	11.9
South Broadway	Rudgear Rd. to Newell Ave.	5.3	9.7	5.3	9.7

(a) Model assumptions: D stability, one meter per second windspeed.
(b) Alternatives 1 and 2: At-grade and grade-separated Cross-Town Connection(s).
(c) Alternative 3: Arroyo Couplet with at-grade Cross-Town Connection.

Source: Earth Metrics, Inc., 1985.

TABLE 5

TABLE 6 - DUST CONTROL REQUIRED MEASURES

I. During clearing, grading, earth moving or excavation:

a. Water trucks or sprinkler systems to be used in sufficient quantities to prevent dust raised from leaving the site.
b. The entire area of disturbed soil to be wet down, sufficient to create a crust, after each day's activities cease.

II. After clearing, grading, earth moving or excavation is completed:

a. The entire area of disturbed soil is to be treated to prevent wind pick up of the soil. This may be accomplished by:

1. Seeding and watering until grass cover is grown.
2. Spreading soil binders.
3. Wetting the area down, sufficient to form a crust on the surface with repeated soakings as necessary to maintain the crust and prevent dust pick up by the wind.
4. Other methods approved in advance by the Air Pollution Control District.

III. During Construction:

a. Water trucks or sprinkler systems to be used to keep all areas of vehicle movement damp enough to prevent dustraised from leaving the site.

1. As a minimum, this will include wetting down such areas in the late morning and after work is completed for the day.
2. Increased watering frequency will be required whenever the wind speed exceeds 15 mph.

b. All roadways, driveways, sidewalks, etc., should be paved as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.

IV. Activation of Increased Dust Control Measures:

The contract of builder shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust off site. Their duties shall include holiday and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the Air Pollution Control District.

Source: San Francisco Bay Area Air Quality Management District, 1983.

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D. VISUAL/AESTHETICS

The Draft EIR, Volume II, analyzed potential visual and pedestrian impacts for numerous roadway improvements. Those applicable to the Council Draft Plan are summarized in the following paragraphs.

For those roadway improvements that would take place within existing rights-of-way, the impacts of increased traffic would partially be offset by the addition of street trees and new or upgraded pedestrian ways (examples: Mt. Diablo Blvd., North Main Street, Civic Drive, North Broadway and Botelho Drive). Some new streets such as the recently constructed Parkside Drive extension, and the proposed Alpine-Bonanza connection and South Broadway extension will give added definition to Core Area activity areas and open up new public views.

For Ygnacio Valley Road, some negative visual impacts may result if the landscaped median is removed to accommodate a one-way couplet design, although implementation of the Ygnacio Valley Road greenway with its wider pedestrian ways, bike lanes and landscaped areas could enhance the edge of the roadway and offset some of the negative impacts.

Environmental Setting

The three roadway alternatives being considered in this Draft Supplemental EIR are focused in two existing right-of-way areas.

1. The Southern Pacific right-of-way between Ygnacio Valley Road and Rudgear Drive historically served the San Ramon Branch of the Southern Pacific Railroad, some underground utilities and an informal hiking trail. Since the removal of the railroad tracks in 1980, the right-of-way has continued to serve as a utility corridor owned and operated by Southern Pacific Pipeline Company and as an unauthorized and unimproved pedestrian trail.

   The Walnut Creek General Plan identifies the right-of-way as a future dedicated regional riding and hiking trail. Uses being considered for that corridor by the City of Walnut Creek and Contra Costa County include: general utility corridor; street right-of-way; regional hiking, riding and bicycling trail; San Ramon By-pass Channel right-of-way and a future regional transit corridor.

   The U.S. Army Corps of Engineers has commenced construction of the San Ramon By-pass Channel. Over the next two to three years, construction of the flood control channel will intensify. Residential and commercial uses adjacent to it will be impacted by construction related noise and visual impacts as identified in the Final Environmental Impact Statement prepared by the Corps of Engineers.

2. The Arroyo Way right-of-way located between North Main Street and Civic Drive is a two-lane public street providing access to a variety of commercial enterprises. From Civic Drive to the Southern Pacific right-of-way, Arroyo Way is a private roadway which serves three or four office and retail uses. The Walnut Creek General Plan transportation element identifies Arroyo Way as a local street and the zoning

ordinance specifies that its future right-of-way width would be 60 feet from North Main Street to Civic Drive. Some new commercial development has taken place in the last five years along Arroyo Way, however, commercial uses along the street can be generally characterized as one story with on grade parking lot type uses.

The Council proposed circulation alternatives would substantially change the character of both the Southern Pacific right-of-way and Arroyo Way. The Southern Pacific right-of-way is the proposed location of the at-grade and grade-separated Cross-Town Connections, while Arroyo Way would become the eastbound segment of the Arroyo Couplet.

Impacts

1. Southern Pacific right-of-way between Ygnacio Valley Road and Mt. Diablo Boulevard - The construction of either the at-grade or grade-separated roadway on top of the flood control channel will result in significant adverse visual and aesthetic impacts on the residents of those single and multiple family structures directly abutting the right-of-way. Single family residents east of the right-of-way on Bradley Avenue, Greenway and Norland Drives, would be at an elevation of approximately 10 to 15 feet lower than the elevation of the roadway. Existing residential stuctures would be located approximately 40 to 60 feet from the edge of the roadway and existing private landscaping would provide some minimal visual buffering. The presence of the roadway and vehicles traveling on it would be pervasive and would cause deminished enjoyment of yards adjacent to the roadway.

   Multiple family residents in structures east of the right-of-way on Sherene Lane and Walker Avenue will be as close as 25 feet and as far as 60 feet from the edge of the roadway. First floor residents would be approximately 10 to 15 feet below the grade of the roadway and second floor residents at about the same level as the roadway. In this area grade-separated structures would rise an additional 20 feet above the grade of the roadway. Presently, there is little or no landscaping to shield the right-of-way and numerous windows, balconies and recreation areas face directly toward the right-of-way. Impacts for these residents would be significant.

   Multiple family residents and structures west of the right-of-way on Carmel Drive, Lincoln Avenue, Mt. Pisgah Road and Village Court will be as close as 30 feet and as far as 50 feet from the edge of the roadway. These structures are at elevations from 10 to 50 feet above the grade of the street and similar landscaping, window and balcony problems occur here as on the east side of the right-of-way.

   People working in commercial buildings, both east and west of the right-of-way near Ygnacio Valley Road would have direct line of site to the roadway and would be set back approximately 30 to 50 feet. Since there is little outdoor commercial activity other than parking lot area associated with these uses, people working at or visiting the sites would not be significantly impacted.

For those people using Civic Park west of the right-of-way, there would be little or no visual impact because most activities on the site are situated well away from the right-of-way and a landscape buffer is maintained in the area.

2. Southern Pacific Right-of-Way, Mt. Diablo Blvd. to Newell Avenue - The construction of the at-grade and grade-separated roadways would have substantially different visual/aesthetic impacts in this segment.

   At-Grade - The at-grade roadway would be located behind a supermarket and two office buildings before turning west and intersecting with South Broadway. The supermarket has no windows or doors facing on the right-of-way and therefore little or no impact is anticipated.

   People in the office buildings would be able to see the roadway and would be located approximately 20 to 30 feet from its edge, however, little outdoor activity would occur adjacent to the roadway and therefore impacts would be minimal.

   Residential structures on Margarito Drive, east of the right-of-way are located on an embankment approximately 40 to 50 feet above the roadway and would be screened from it. Holcomb Court residents adjacent to the right-of-way would be approximately 70 to 100 feet from the edge of the roadway and currently have some landscape screening. All of these residents would be cognizent of the at-grade roadway, however, visual and aesthetic impacts would be minimal.

   Grade-Separated - The grade-separated roadway would have significantly greater impacts compared to the at-grade alternative. The greatest visual and aesthetic impacts would be on Mt. Diablo Boulevard and Newell Avenue. Elevated structures (over crossings) and access ramps would create a new visual entry to the core area. For people in the commercial buildings west of the right-of-way and people driving along South Broadway, the grade-separated roadway would appear as a freeway in this segment. It would be a highly visible facility.

   Residents living on Margarito Drive would continue to be screened from the roadway by the existing embankment, however, the increased elevation of the roadway would make it more pervasive. People residing on Holcomb Court would be significantly impacted because the elevated roadway would be approximately 30 feet from their living spaces.

3. Southern Pacific Right-of-Way, Newell Avenue to Rudgear Road - The following impacts are summarized from the South Broadway extension environmental impact report (City of Walnut Creek, April 1979): (1) the project will impact existing visual quality; (2) it will affect existing privacy of corridor residents; and (3) the versatility of circulation and recreation uses in the corridor. Potential impacts beyond those mentioned above would apply primarily to the grade-separated Cross-Town alternative. The elevated structure and ramps near Newell Avenue would cause perceptible but not significant impacts to people in the commercial uses west of the right-of-way. On the east

side the Council Draft Plan calls for future residential uses adjacent to Newell Avenue. The visual/aesthetic impacts of the roadway would predicate the need for larger setbacks adjacent to the right-of-way and substantial landscape buffers.

4. Arroyo Way Between North Main Street and Southern Pacific Right-of-Way - Construction of the Arroyo couplet would result in a substantial change of character on this street. The visual/aesthetic impacts on the commercial businesses that would front it are not however considered to be significant (impacts on businesses and business relocations are discussed on pages 60-62 of this report). Existing structures that fall within the future right-of-way would have to be purchased or redesigned. Adequate setbacks and landscaping could then be installed. New commercial structures would be designed to accommodate the City standards for design adjacent to the roadway.

Mitigation Measures:

1. Landscaping of the fast-growing type should be incorporated into the project to reduce visual impacts and invasion of privacy.

2. Landscape berms should be used to soften the edge of the roadway.

3. Maintain pedestrian/equestrian access with the use of a trail and provide east-west street crossings at or near existing points of access.

E. IMPACTS OF SHARED USES WITHIN THE SOUTHERN PACIFIC RIGHT-OF-WAY

The Contra Costa County Flood Control District in conjunction with the U.S. Army Corps of Engineers has commenced construction of a flood control channel within the Southern Pacific Right-of-Way from a location just south of Ygnacio Valley Road where the Walnut Creek Channel crosses the right-of-way to a point south of Newell Avenue where the San Ramon Creek crosses the right-of-way. If the proposed at-grade or grade-separated alternatives are constructed within the right-of-way it will be necessary to share the right-of-way with a proposed transit facility, a proposed regional hiking, riding and bicycling trail and a variety of underground utilities. All of these uses can be accommodated within the existing 100-foot right-of-way, between intersections, however, at intersections some addditional right-of-way will be required.

Conceptual engineering design studies anticipate that the Cross-Town Connection roadways would be constructed by covering the channel with concrete "T"-Beams. The regional trail would be located to one side and the transit facility to the other side of the channel, thereby providing exclusive rights-of-way for all surface facilities. It is important to note that the cost of each facility increases as more uses are added. In order to reflect the total costs most accurately, the cost estimate for the Cross-Town Connection roadways were prepared by assuming that all proposed uses were ultimately developed. Therefore the cost estimate includes a

substantial amount of cost for retaining walls on both sides of the roadway for the regional trail and the transit facility. It is important to note that the true cost can only be known when preliminary engineering is accomplished for all facilities.

In addition to the cost impacts, the construction of both a roadway as well as a transit facility will create a number of conflicts between these two uses. These conflicts will occur at intersections where turning traffic from the Cross-Town Connection will cross the transit lanes and regional trail. Additional impacts may result if the transit facility is designed on grade.

As a mitigation for turning vehicles to and from the Cross-Town Connection, separate signal phases should be provided for both right and left turns so that turns can be prevented when pedestrians and/or transit vehicles are crossing the roadway.

Mitigation for points of direct conflict between through traffic on the Cross-Town Connection and the transit facility can be accomplished by designing the transit line to one side or the other of the Cross-Town for its entire length or by providing a grade separation at some point along the alignment. This will require joint planning and preliminary design of the alignments. For example it may be possible to provide an underpass at Ygnacio Valley Road for both westbound traffic turning on to the Cross-Town Connection southbound as well as the transit and regional trail facilities. If this is accomplished, then conflicts between the Cross-Town roadway and the transit facility will be minimized by aligning the transit line on the west side of the Cross-Town for its entire length. An alternative design would be to construct the transit line on the east side of the roadway to eliminate conflicts with turning vehicles at Mt. Diablo Boulevard and Broadway, that a grade separation south of Newell would be desired to allow the transit line to cross the roadway where it deviates from the railroad alignment.

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V. ALTERNATIVES

The Final EIR, Volume I, lists numerous land use, transportation and circulation, and urban design alternatives that have been considered during the Core Area Plan revision process. This Supplemental EIR is focused on three additional roadway improvement alternatives in the Ygnacio Valley Road corridor. The alternative section will provide a summary comparison of several Ygnacio Valley Road improvements, alternative levels of total development and miscellaneous improvements suggested by the Council.

Level of Service Comparison

Table 7 is a level of service comparison for several one-way couplet and non-couplet alternatives. The alternatives have not all been analyzed under the same land use arrangement or level of development. The land use and intensities being considered by the Walnut Creek City Council results in a greater level of impact on Ygnacio Valley Road than the Hearing Draft Plan because higher office intensity is focused along the Ygnacio Corridor. Therefore, the Lacassie and Courthouse couplets and the eight-lane Ygnacio Valley Road alternative would be nearly one level of service worse on Ygnacio Valley Road under the Council Draft Plan. The Pringle Avenue couplet at 1.0 FAR, however, is sufficiently close to the proposed Council plan that the margin of statistical error in the traffic analysis would result in practically no difference in the level of service between the two land use assumptions. Some general conclusions that can be drawn from the comparison of Ygnacio Valley Road alternatives is:

1. The couplet alternatives provide the best level of service for traffic on Ygnacio Valley Road.

2. The Cross-Town Connection alternatives significantly impact Mt. Diablo Boulevard and as stated on Page 34, cannot be mitigated without substantial cost and disruption to businesses, buildings and pedestrian traffic in and around Mt. Diablo Boulevard.

3. All of the alternatives have unacceptable levels of service at the Ygnacio Valley Road/Walnut, Ygnacio Valley Road/Homestead and North Main and Parkside intersections. Mitigating measures for the Walnut and Homestead intersections were suggested by the Council and are discussed on Pages 62-64 . The North Main/Parkside intersection is similar to Mt. Diablo Boulevard, i.e. it cannot be mitigated without substantial cost and disruption to businesses and buildings.

4. All of the alternatives fail to meet the provisions of the Traffic Control Initiative.

Advantages/Disadvantages

Table 8 is a comparison of advantages, disadvantages and impacts of the various alternatives. Needless to say, all the alternatives have both advantages and disadvantages. A general observation from Tables 7 and 8 is that although the couplet improvements provide better circulation and levels of service in the Ygnacio Valley Road corridor, they are a more

SUPPLEMENTAL EIR YGNACIO VALLEY ROAD ALTERNATIVES
LEVEL OF SERVICE COMPARISON FOR YEAR 2000, PM PEAK HOUR

	ONE-WAY COUPLETS				NON-COUPLETS		
INTERSECTION	LACASSIE[1]	PRINGLE[2] AT 1.0 FAR	COURT[1] HOUSE	ARROYO W/[3] AT-GRADE CROSS-TOWN	8 LANE[1] YGNACIO	AT GRADE[3] CROSS-TOWN	GRADE SEP.[3] CROSS-TOWN
NORTH MAIN & PARKSIDE	E	E	E	F	E	F	F
OAKLAND & Y.V.RD.	D	A	A	D	E	D	D
N.CALIFORNIA & Y.V.RD.	E	E	C	E	E	E	E
N. MAIN & Y.V.RD.	C	C	C	D	E	F	F
N.BROADWAY & Y.V.RD.	C	D	C	D	E	F	F
CIVIC & Y.V.RD.	E	D	F	B	F	F	F
WALNUT & Y.V.RD.	F	F	F	F	F	F	F
HOMESTEAD & Y.V.RD.	F	F	F	F	F	F	F
LACASSIE & N.CALIFORNIA	E	-	-	-	-	-	-
LACASSIE & N.MAIN	C	-	-	-	-	-	-
LACASSIE & N.BROADWAY	C	-	-	-	-	-	-
PRINGLE & RIVIERA	-	B	B	-	-	-	-
PRINGLE & N.CALIFORNIA	-	D	C	-	-	-	-
PRINGLE & N.MAIN	-	C	C	-	-	-	-
PRINGLE & N.BROADWAY	-	C	C	-	-	-	-
PRINGLE & CIVIC	-	D	-	-	-	-	-
ARROYO & N.MAIN	-	-	-	D	-	-	-
ARROYO & N.BROADWAY	-	-	-	D	-	-	-
ARROYO & CIVIC	-	-	-	E	-	-	-
ARROYO & CROSS-TOWN	-	-	-	E	-	-	-
MT.DIABLO & CALIFORNIA	D	D	D	F	D	F	F
MT.DIABLO & MAIN	-	D	-	F	D	F	F
MT.DIABLO & BROADWAY	D	D	D	F	D	F	F
MT.DIABLO & CROSS-TOWN	-	-	-	F	-	F	D
S.MAIN & NEWELL	D	D	D	C	D	C	C
S.BROADWAY & NEWELL	-	-	-	F	D	F	C

NOTES:
1 Hearing Draft land use and level of development.
2 Hearing Draft land use at 1.0 FAR level of development nearly equals Council land use and level of development.
3 Council land use and level of development.

TABLE 7

TABLE 8

SUPPLEMENTAL EIR, YGNACIO VALLEY ROAD ALTERNATIVES
COMPARISON OF ADVANTAGES/DISADVANTAGES

Criteria	Lacassie Couplet	Pringle Couplet	Courthouse Couplet
Access:	Good access to Central Core	Good access to BART, Golden Triangle and Northern Core	Good access to BART Golden Triangle & Northern Core
Circulation:	Good north-south and east-west circulation (if Pringle extension included) except at Civic/Y.V.Rd.	Good north-south and east-west circulation	Good north-south and east-west circulation except at Civic/Y.V.Rd.
Operations:	One-way streets provide most efficient traffic flow and simplify intersection operations. Civic Drive would not be a through street.	One-way streets provide most efficient traffic flow and simplify intersection operations.	One-way streets provide most efficient traffic flow and simplify intersection operations.
I-680/24 Freeway Improvements	Ties into proposed improvements, timing not critical	Requires redesign. timing critical	Requires redesign, timing critical
Aesthetics	1. Provision for Y.V. Rd. greenway	1. Provision for Y.V. Rd. greenway	1. Provision for Y.V. Rd. greenway
	2. Creates new pedestrian barrier between BART & retail core	2. Creates need for retaining walls between N. Main & Civic	2. Creates an immense intersection at Civic & Y.V.Rd.
Residential Impacts	Potential noise & air quality impacts to residents on south side of Lacassie	- - - -	- - - -
Business	Requires r/w acquisition & substantial business relocation	Requires r/w acquisition & substantial business relocation	Requires r/w acquisition & substantial business relocation
Costs (1985 $ million)	$23 (includes Pringle extension)	$26	$25

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TABLE 8 (Continued)

SUPPLEMENTAL EIR, YGNACIO VALLEY ROAD ALTERNATIVES
COMPARISON OF ADVANTAGES/DISADVANTAGES

Arroyo Couplet w/Cross-Town	8 Lane Y.V.Rd.	At-Grade Cross-Town	Grade Separated Cross-Town
Good access to BART, No. & Central Core, & Broadway Plaza	No change over existing conditions	Good access to Central Core & Broadway Plaza	Good access to Central Core & Broadway Plaza
Good north-south & east-west circulation except at Calif./Y.V.Rd.	Does not improve corridor circulation	Diverts approx. 20% of traffic from Y.V.Rd. but does not obviate need for additional improvements.	Diverts approx. 20% of traffic from Y.V. Rd. but does not obviate need for additional improvements.
One-way streets provide most efficient traffic flow & simplify intersection operations	Does not improve intersection operations	Would adversely effect Mt. Diablo Blvd. intersections	Would adversely affect Mt. Diablo Blvd. intersections
Ties into proposed improvements; timing not critical	Ties into proposed improvements; timing not critical	Ties into proposed improvements; timing not critical	Ties into proposed improvements, timing not critical
1. Provision for Y.V.R. greenway	1. Creates a larger pedestrian and visual barrier	1. Creates a new roadway within an open space/utility corridor	1. Creates a new roadway within an open space/utility corridor
2. Creates a new roadway within an open space/utility corridor		2. Increases pedestrian/vehicular conflicts in the pedestrian retail core.	2. Creates an elevated roadway between Mt. Diablo and Newell 3. Increases pedestrian/vehicular conflicts in the pedestrian retail core.
Potential noise, air quality & visual impacts to residents adjacent to S.P. r/w	- - - -	Potential noise, air quality & visual impacts to residents adjacent to S.P. r/w	Potential noise, air quality & visual impacts to residents adjacent to S.P. r/w
Requires r/w acquisition, substantial business relocation & will impact businesses & pedestrians along Mt. Diablo	Requires some r/w acquisition	Requires some r/w acquisition & will impact businesses & pedestrians along Mt. Diablo	Requires some r/w acquisition & will impact businesses & pedestrians along Mt. Diablo.
$32	$15	$12	$31

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TABLE 8

costly remedy. The cost estimate for Lacassie includes the Pringle Extension between North Main Street and North Broadway. This improvement was identified by the City's traffic consultant as a needed and desirable circulation improvement.

The property impacts and residential/commercial relocations summarized in Table 8 are listed below. No mitigation measures will be listed because the only mitigation measure that addresses all of the impacts is the "do nothing" alternative and that option has other social and policy impacts.

1. Lacassie Couplet:

   a. Significant impact to residential properties on the south side of Lacassie between Oakland and North California Boulevards (relocation probably required).

   b. Significant impact to commercial businesses on North Main Street, Carlback Street, North Broadway and North Civic Drive (relocations probably required).

   c. Significant impact to commercial and residential properties on the south side of Ygnacio Valley Road between Civic Drive and Homestead Avenue due to the addition of one eastbound lane.

2. Pringle Couplet:

   a. Significant impact to numerous commercial businesses between North Main Street and North Civic Drive due to the establishment of a new right-of-way (relocation of businesses probably required).

   b. Potential impact to Walnut Creek Elementary School District Office at Ygnacio Valley Road and Walnut Boulevard.

   c. Significant impact to commercial and residential properties on the south side of Ygnacio Valley Road between Walnut Creek Channel and Homestead Avenue due to the addition of one eastbound lane (relocations may be required).

   d. Potential impact to commercial property and parking lot on the north side of Pringle Avenue between North Main Street and North California Boulevard (relocation probably not required).

   e. Significant impact to BART parking lot and landscaping on the south side of Pringle Avenue between North California Boulevard and I-680.

3. Courthouse Couplet:

   Same as Pringle Couplet.

4. Arroyo Couplet With At-Grade Cross-Town Connection:

a. Potential impact to Walnut Creek Elementary School District located at Ygnacio Valley Road and Walnut Boulevard.

b. Significant impact to residential and commercial properties on the south side of Ygnacio Valley Road between the Cross-Town Connection and Homestead Avenue due to the addition of a new eastbound lane.

c. Significant impact to parking lot and structure located at 750 South Broadway (relocation probably required).

d. Significant impact to numerous businesses on the north and south side of Mt. Diablo Boulevard between the Cross-Town Connection and California Boulevard if Mt. Diablo is widened to six lanes (relocations would be required).

e. Significant impact to Gemco parking lot and the truck loading dock located at the North California Boulevard/Ygnacio Valley Road intersection (relocation will be required).

f. Significant impact to numerous businesses on either north or south side of Arroyo Way between North Main Street and Cross-Town Connection (relocation will be required for businesses and parking).

g. Significant impact to the office building and parking lot located at 925 Ygnacio Valley Road (relocation may be required).

5. Eight Lane Ygnacio Valley Road:

a. Potential impact to numerous residential and commercial properties (including the Walnut Creek Elementary School District Office Office) on the north and south sides of Ygnacio Valley Road from Oakland Boulevard to Homestead Avenue due to additional right-of-way needed for sidewalks and landscaping (relocations probably not required).

b. Significant impact commercial office and parking lot located at 700 Ygnacio Valley Road due to triple left turn lane westbound at Civic Drive (relocation of parking lot probably required).

6. At Grade Cross-Town Connection:

a. Potential impact to Walnut Creek Elementary School District located at Ygnacio Valley Road and Walnut Boulevard.

b. Significant impact to residential and commercial properties on the south side of Ygnacio Valley Road between the Cross-Town Connection and Homestead Avenue due to the addition of a new eastbound lane.

c. Significant impact to parking lot and structure located at 750 South Broadway (relocation probably required).

d. Significant impact to numerous businesses on the north and south side of Mt. Diablo Boulevard between the Cross-Town Connection and California Boulevard if Mt. Diablo is widened to six lanes (relocations would be required).

7. Grade Separated Cross-Town Connection:

   a, b and d as listed above plus potential property acquisition and business relocation adjcent to Mt. Diablo Boulevard and Newell Avenue grade separated crossings.

Alternative Levels of Development

Land use options and alternative levels of total development have been studied throughout the Core Area Plan revision process as evidenced in the Final and Draft EIR's (Volumes I & II). Table 9, in this report compares the numerous alternative levels of total development considered to date and indicates which Ygnacio Valley Road traffic alternatives were concurrently studied. This information is being provided to give readers a clearer understanding of the full range of alternatives and to provide an ongoing and consistent tabulation.

Miscellaneous Improvements Considered by the Council

The City Council requested that several roadway improvements and concepts be studied in addition to the Cross-Town Connections and Arroyo Couplet. These issues are discussed below.

1. Design and Traffic Implications of Underpass to Cross-Town Connection

   This improvement would provide a direct underpass ramp to the Cross-Town Connection for westbound Ygnacio Valley Road traffic. It would clearly provide improved capacity and eliminate the need for a signal at the Cross-Town/Ygnacio Valley Road intersection. To construct an under-pass would require the grade on Ygnacio Valley Road be raised. An underpass could be constructed with the same alignment and design speed (40 mph) as an overpass (suggested in the Cross-Town Connection Feasibility Study), requiring a fill of about seven feet. Raising the grade along Ygnacio Valley Road would have an adverse impact to properties adjacent to the underpass because access for vehicles and pedestrians would be cut off unless it could be restored by stairways and ramps. Even if access could be preserved, the visual intrusion would remain. On the north side of the street the impacts would be the same regardless of whether a ramp were constructed as an over or underpass; the existing school access drive would be blocked, a school office building would need relocation and access to the P.G.& E. substation would be impaired.

2. Raising the Grade along Ygnacio Valley Road at Walnut and Homestead

   The existing elevation of the Ygnacio Valley Road/Civic intersection is about 142 feet above sea level, which is also the elevation at Ygnacio Court, some 2400 feet to the east. Thus, Ygnacio Valley

TABLE 9

COMPARISON OF ALTERNATIVE LEVELS OF TOTAL DEVELOPMENT
AND RELATED YGNACIO VALLEY ROAD IMPROVEMENT PROJECTIONS TO YEAR 2000

LAND USE	ALT. 1 1985 BASE YEAR*	ALT. 2 EXIST. CORE AREA	ALT. 3 MIN. OFFICE/ MAX. RES.	ALT. 4 MOD. OFFICE/ MOD. RES.	ALT. 5 MARKET GROWTH	REF-ERENCE PLAN	CON-CEPT A MIN. OFFICE	CON-CEPT B METERED REF. PLAN	CON-CEPT C LIMITED OFFICE	HEARING DRAFT P.C. RECOMMEN-DATION	COUNCIL DRAFT
OFFICE (million sq. ft.)	4.0	6.9	5.7	8.2	11.2	7.9	5.4	7.7	5.6	6.1	6.1
RETAIL (million sq. ft.)	2.3	2.8	2.8	2.8	8.0	3.3	3.2	3.3	3.2	3.3	3.2
HOUSING UNITS	4,350	5,000	7,900	5,550	6,750	6,400	6,500	6,400	6,300	6,300	7,700
HOTEL UNITS **	600	1,500	1,150	1,500	2,000	1,500	1,150	1,500	1,150	1,500	1,650
BART PARKING SPACES	1,200	1,200	1,500	2,500	2,500	2,500	600	600	600	600	600
TRAFFIC											
ALTERNATIVES FOR YGNACIO VALLEY ROAD CORRIDOR	← Lacassie or Pringle Couplet with 4 or 5 lanes →				Lacassie or Pringle Couplet w/6 lanes, no left turns on Calif., possible No/So couplet	Pringle Couplet	8 lane Y.V. Rd.	Pringle Couplet	8 lane Y.V. Rd.	8 lane Y.V. Rd.	------

* Corrected for actual development
** Hotel rooms = 500 sq. ft. per room

Source: Walnut Creek Community Development Department, July 1984.

TABLE 9

Road could be held at a constant elevation between Civic Drive and Ygnacio Court, allowing for grade separations at Walnut, Homestead and the Cross-Town Connection.

Such an alternative would have severe engineering impacts for properties fronting on Ygnacio Valley Road. Since existing elevations along Ygnacio Valley Road are as low as 122 feet (for most of the distance from Walnut to Homestead), a 20-foot retaining wall would be required which would effectively cut off all access to properties on both sides of the road.

Without making a connection to Ygnacio Valley Road, properties on Walnut Boulevard and Homestead would have their east/west access severely affected, especially that portion of Walnut Boulevard north of Ygnacio Valley Road. Thus, it would be necessary to construct a frontage road and ramps along both sides of Ygnacio Valley Road, requiring acquisition of about 250 feet of right-of-way.

If all of these improvements were constructed, the effect upon Ygnacio Valley Road traffic conditions would be to shift the P.M. "bottle-neck" condition at the Homestead intersection further east out to the Marchbanks/Tampico intersection.

3. Provide Connection to North Civic Drive from Cross-Town Connection

The suggestion would require construction of a roadway between the Cross-Town Connection and Ygnacio Valley Road to North Civic Drive. Such a connection would be difficult to accomplish and would have questionable beneficial impacts on traffic patterns.

If such a connection were made at grade, the number of conflicting movements at the Cross-Town/Ygnacio Valley Road intersection would increase there by severely reducing the capacity at that location (the existing proposal is for a "T" intersection with a two-phase signal). If a grade-separated connection were constructed, it would probably require bringing the westbound Ygnacio overcrossing to the Cross-Town Connection while constructing underpasses below Ygnacio for the connection to Civic Drive. This would be a very costly engineering project. Finally, such a facility would create another opportunity for through traffic to use the Cross-Town Connection, and generate more traffic demand despite the fact that it has been shown to be over capacity as currently proposed.

4. Impact of Not Widening Ygnacio Valley Road East of the Core

All of the major proposals for improving levels of service along Ygnacio Valley Road in the Core Area have included some degree of widening west of Homestead Avenue in order to properly merge all of the roadway lanes together. However, no proposal exists to widen Ygnacio Valley Road through and east of Homestead. The impact of not widening Ygnacio Valley Road to the east is not quantitatively identified in this environmental report because traffic impacts have been computed on the basis of travel demand (i.e., vehicles were assigned to the roads in accordance with travel desire irrespective

of capacity limits). These studies have all indicated that demand will exceed capacity on Ygnacio Valley Road at Homestead. Since demand cannot in reality exceed capacity, a "bottleneck" condition will occur at this location.

When demand reaches capacity a variety of effects can occur. First, vehicles will divert to alternative routes, so long as alternatives afford a significant time savings for drivers. If this is not possible then vehicles may que up and incur substantial delays. Ultimately, such conditions may result in drivers changing their trip making habits. For these reasons, once intersections in the roadway network reach capacity it is no longer possible to precisely predict roadway conditions.

Nevertheless, in order to understand the sort of impacts which may occur if Ygnacio Valley Road is not widened east of Homestead, a "worst case" scenario can be envisioned in which there is no reduction in travel demand, despite factors noted above; when the demand exceeds capacity, the vehicle arrival rate exceeds the rate at which vehicles clear the intersection. Consequently the intersection acts as a meter, limiting downstream flow to a relatively constant rate. Figure 25 graphically depicts how roadway volumes might change under the Council draft land use if Ygnacio Valley Road is not widened to the east. The solid line indicates the existing volumes eastbound by ten minute intervals. The existing peak hour is centered around the five-thirty p.m. at a location east of the Core Area. Analysis of the existing volumes recorded at loop detectors on Ygnacio Valley Road indicates the roadway is presently close to capacity with as many as 600 or more vehicles eastbound during the peak hour. The roadway could potentially carry 10-15% more vehicles. However, the level of development being considered at this time would add about 30% to the peak hour flow. Depending upon the increase in traffic peak volumes, the roadway could reach capacity at 4:30 p.m. and remain there during the entire 4:30 to 6:00 p.m. period if there is no diversion or reduction in trip making. During this entire time the roadway will be backed up and operating in a stop and go condition.

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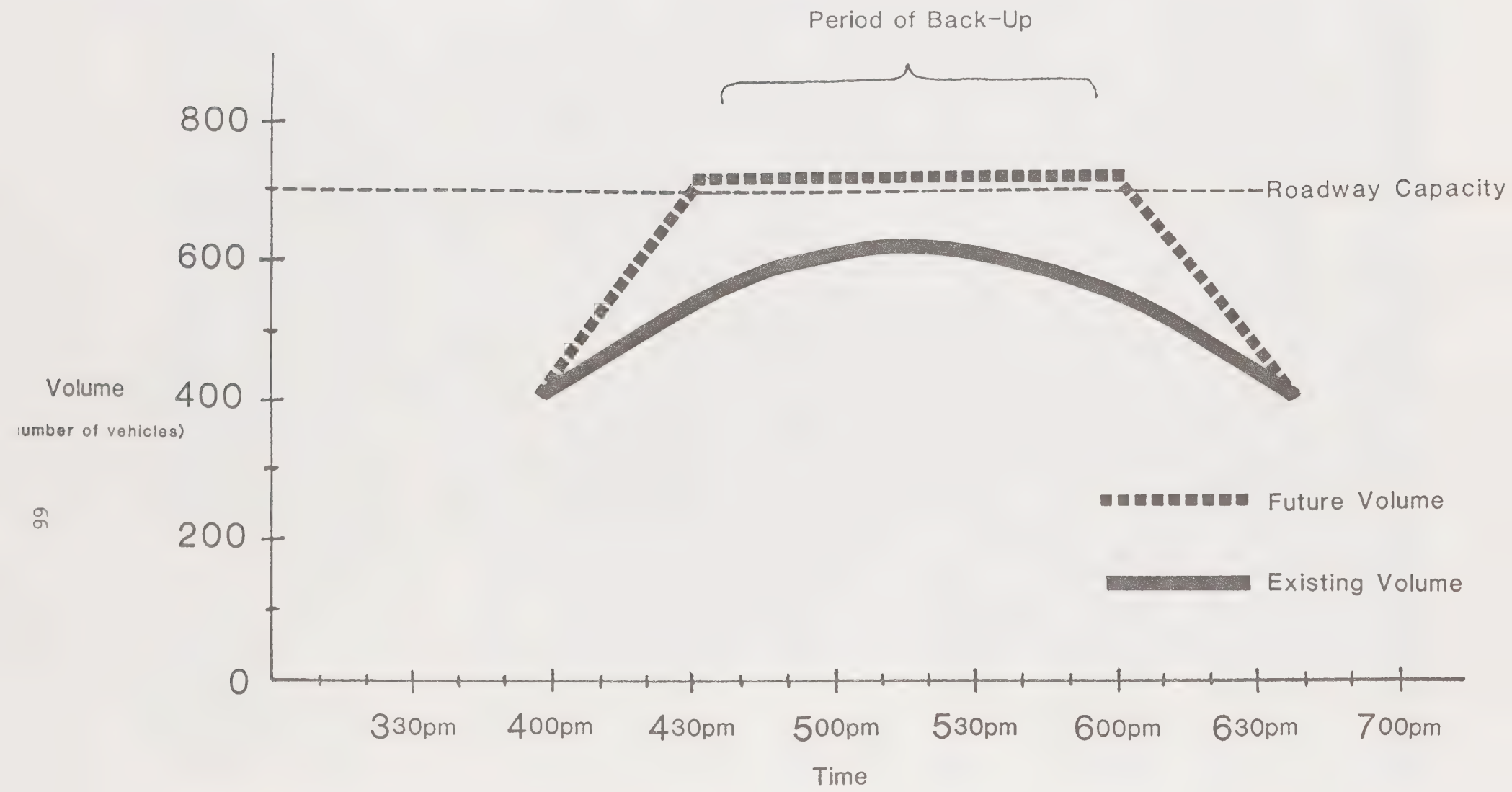
FIGURE 25

Ygnacio Valley Road Volumes

Eastbound PM Peak Hour



VI. SIGNIFICANT UNAVOIDABLE OR IRREVERSIBLE EFFECTS

The Draft EIR, Volume No. II, identified several natural and man-made unavoidable or irreversible effects created by the proposed revisions to the Core Area Plan. The new environmental concerns identified in this document would result in unavoidable and irreversible cumulative increases in traffic volume, ambient noise levels and air quality impacts.

If either Cross-Town Connection alternative was implemented, numerous residents adjacent to the Southern Pacific Right-of-Way would sustain diminished enjoyment of outdoor yard spaces and some indoor spaces adjacent to the proposed roadway.

The Connections would also direct larger volumes of traffic to Mt. Diablo Boulevard and potentially effect business and pedestrian activity.

Traffic demand on the South Broadway Extension would increase causing greater impacts than described in the South Broadway Extension EIR and all proposed Ygnacio Valley Road corridor roadway improvements considered thus far in the plan revision process would not meet the provisions of the Traffic Control Initiative.

VII. RELATIONSHIP BETWEEN SHORT TERM USES AND LONG TERM PRODUCTIVITY

The proposed revisions to the Core Area Plan are relatively short-term in their ten-year scope, however, they reinforce long-term City goals in the areas of land use, transportation and circulation, urban design and aesthetics, open space and natural resources.

The Supplemental EIR, focuses on long-term issues of transportation and circulation. Several of the non-couplet roadway alternatives analyzed in this report are short-term measures because they do not obviate the need for further improvements to the Ygnacio Valley Road corridor. The couplet option, while not a panacea for Core Area traffic congestion would provide a long-term approach toward solving a City-wide problem.

VIII. GROWTH INDUCING IMPACTS

The Council Draft Plan may have internal growth-inducing effects on Core Area development and external affects on adjoining residential neighborhoods.

A. Internal Effects

Compared to existing Core Area policy (adopted November 1975) the Council Draft Plan may have the following general affects on development in the Core Area:

1. Anticipated office development may be reduced by approximately 800,000 square feet over the next fifteen years and would continue

to be focused around the Walnut Creek BART Station area and along Ygnacio Valley Road.

2. Anticipated retail uses may increase by 500,000 square feet up to the year 2000 with pedestrian/retail uses being strengthened in the central Core and general retail encouraged throughout the remainder of the Core Area.

3. The 2700 additional residential units reflects a new community policy to encourage higher intensity housing in the Core Area. Some of the housing areas would permit ancillary retail services.

4. Mixed use of the BART site for hotel/retail and BART parking uses may encourage development of public facilities in or around BART Station. This may include expansions of BART Station area as a central transportation facility.

B. External Effects

Growth, traffic and parking outside of the Core Area may also be effected by the Council Draft Plan. Potential impacts on adjoining neighborhoods are summarized below, however, the full text appears in the Draft EIR, Volume No. II, pages 127-131.

1. Development Pressure

In some of the neighborhoods listed below there will most likely be pressure for increased residential densities or more intensive changes and land use because they abut developing portions of the Core Area:

a. Buena Vista Avenue/Parkside Drive,
b. Oakvale Road/Terrace Road,
c. Boulevard Way,
d. Olympic Boulevard,
e. Newell Avenue/Lilac Drive,
f. South Main Street/Danville,
g. Newell Avenue/San Miguel Avenue,
h. Mt. Diablo Boulevard/Walker Avenue,
i. Ygnacio Valley Road,
j. Oak Road,
k. Jones Road,
l. North Main Street.

2. Increased Traffic

Increased traffic, especially on Ygnacio Valley Road, may create a desire to develop non-residential uses on such roads where there is more congestion and noise. Such pressure may be seen south of the BART Station and east of the Southern Pacific Railroad right-of-way where office development may complete with multiple family residential uses.

3. Parking Spillover

As Core Area development and demand for use for BART system increases, there becomes increased spillover of parking by BART commuters and Core Area employees into adjoining neighborhoods outside of the Core. This problem is proposed to be mitigated in the revised Plan by a neighborhood parking permit plan in neighborhood areas requesting such a program and by an increase of public parking structures within the Core Area.

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Core Area Traffic Study for the City of Walnut Creek, DKS Associates, May 1982.

Origin/Destination Study for the City of Walnut Creek Core Area, JHK Associates, May 1985.

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City of Walnut Creek Documents:

General Plan, September 1971, as amended;
Core Area Plan, November 1975, as amended;
Final EIR, South Broadway Extension, April 1979;
Final EIR, 1985 Core Area Plan Studies, Volumes I-III, March 1985;
Hearing Draft 1985 Core Area Plan, March 1985.

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